

THE DENTAL DIGEST



E. MULLER JR. N.Y.

A PRIZE 4 INCH GUN CREW ON THE O'BRIEN

JULY 1917 VOL. XXII NO. 7

EDITED BY GEORGE WOOD CLAPP, D.D.S.

PUBLISHED BY THE DENTISTS' SUPPLY CO.

CANDLER, BLDG. TIMES SQUARE,

220 WEST 42nd ST. NEW YORK.

CAUTION!

A certain mail order house has been advertising

**"Twentieth Century Composition
Pin Teeth**

FOR PLATE REPAIR WORK

200 Miscellaneous teeth mounted on Wax \$5.00"

A friend of ours sent \$5.00 and ordered the teeth.

What do you think he received?

200 odd teeth with base metal pins baked in the porcelain. They are **not Twentieth Century Teeth**, neither are they cheap at the price charged for them.

Manufacturers of such teeth are constantly destroying such miscellaneous teeth which accumulate in the process of manufacture and are of little value.

Better have the **genuine Twentieth Century Teeth** with pins soldered to platinum anchorages in the porcelain from a **reputable dealer**.

THE DENTAL DIGEST

Vol. XXIII

JULY, 1917

No. 7

BEHIND THE LINES OF VERDUN*

BY ALONZO MILTON NODINE, D.D.S., NEW YORK

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THIRD PAPER

The first patient was Pasquereau, a private, wounded at Verdun. He had a compound fracture of the humerus and radius, and wounds in the chest. The compound fracture was badly infected. It suppurated continuously due to infected foreign material carried into the depth of the wound. There were several large rubber tube drains inserted into his arm. The pathological process had stimulated the bone producing cells so that the elbow joint was about twice the size of normal and was completely ankylosed.

An examination of his mouth disclosed a large suppurating abscess in the region of the upper first right molar with broken down teeth on either side. In the lower jaw the three molars were beyond repair. An X-ray examination showed the upper first molar, upper second molar and first and second bicuspids infected.

The following day under novocaine the three lower molars were extracted, the sockets curetted of any granulomas and the process smoothed with bone cutting forceps and packed with iodoform gauze. This was changed every day. Owing to his poor physical condition and the extreme pain of his wounds most of the dressings were changed while he was in bed. At a later date his upper molars and bicuspids were removed and his teeth scaled and polished. His physical condition improved so rapidly after this that he was able to be sent south to a convalescent hospital.

My second patient was Oswald Holtz, son of General Holtz, wounded in the battle of Champagne. The terrible severity of this attack shattered the nerves of many who took part, his included. He was wounded

*Continued from the May number.



Author chiseling out a root for a blessé

bulged down half of the roof of his palate. This was lanced. A large amount of pus was discharged and the wound packed with iodoform gauze.

The next day under conductive anesthesia the upper molar was removed. The palatal root was broken and in using an elevator the tip of the root was pushed into the maxillary sinus. The following day under ether the opening into the maxillary sinus was enlarged with a large gauze and then irrigated with normal saline solution. The maxillary sinus was packed with one inch iodoform gauze. The upper first bicuspid was removed and lower second bicuspid and first molar were removed.

This patient's nerves were so shattered that only by the aid of an anesthetic, such as ethyl chloride, could the dressings be changed.

The maxillary sinus was irrigated every other day, the opening painted with iodine and packed. The opening gradually closed without any suppuration.

Le Blanc, wounded at Verdun, had penetrated wound of the face passing from a point about three quarters of an inch in front of the maxillary sinus; then under the floor of the orbit into the great wing of the sphenoid.

This produced a paralysis of the sensory nerves of the right eye and ankylosis of the temporo-maxillary articulation.

An examination of his mouth revealed the upper first bicuspid and upper left canine and first bicuspid abscessed. These were extracted under novocaine, the sockets curetted, the process clipped with bone cutting forceps and then packed with iodoform gauze.

After these had healed the first step in reducing the ankylosis was made. Rubber tubing was placed between the upper and lower incisors, canines and bicuspids.

in both legs, right ankle and feet. These wounds would almost completely heal, then they would open up until several small spicules of bone worked out.

An examination of his mouth showed a large abscess extending from the first bicuspid to the second molar. It was as large as an egg and

In twenty-four hours the jaws were opened about three-eighths of an inch, with considerable pain at the left temporo-mandibular, the articulation and the muscles of that region. Modelling composition which hardened quickly was placed between the incisors, canines and molars to relieve the soreness caused by the rubber tubing. In three or four days the modelling composition was inserted between the front teeth and base plate gutta percha with cement was packed tightly between the upper and lower molars.

Later there was enough space between the molars to insert rubber tubing. This process was continued until, when I left the hospital he could open his mouth about three-quarters of an inch and could masticate his food with some degree of comfort. The fact that the left side was not ankylosed interfered with the opening of the right side, because no matter how much space was obtained on the right hand side the left hand side would open up still more and relieve the pressure on the right hand side.

Had the suppuration in this deep wound stopped, I would have preferred an operation to close the large hole under his orbit. But any attempt to have performed such an operation would have confined the infection with almost certain production of a meningitis.

Duquesne was wounded at Verdun. He had a compound fracture of the lower right leg just above the ankle. The cellular tissue of the lower leg was badly infected with considerable swelling of the thigh.

When I was called to see him in the reception ward he was in bed. He had been given morphine for several nights for pain from a large alveolar abscess on the upper right side in the region of the first molar and bicuspid. The whole right side seemed involved. The infection extended up to the eye and nose and to the third molar. He was the color of lead. Under ethyl chloride this abscess was lanced with a discharge of a considerable amount of pus. The wound was packed with iodoform gauze.

Six days later while still in



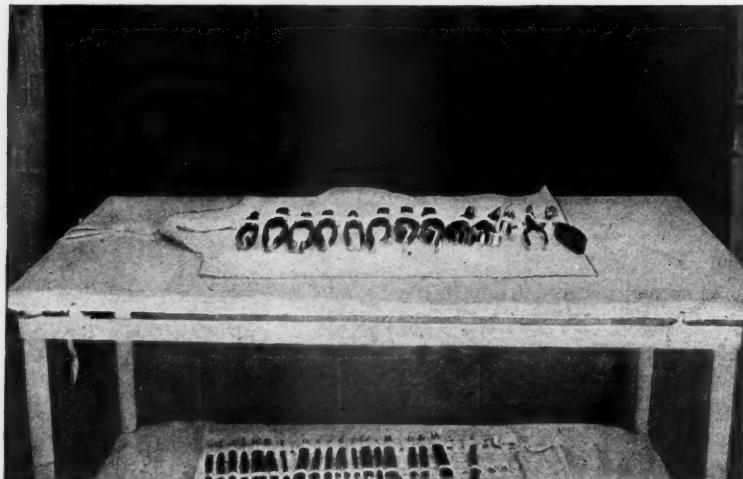
French nurse preparing novocaine solution



Drugs and materials

bed, under novocaine, the three broken molars and two bicuspids on the right side were removed, the sockets thoroughly curetted, the alveolus trimmed and the wound packed with orthoform and iodoform gauze.

Several days later the lower right broken down molars and second bicuspid, the upper left first and second bicuspids and the lower left first molar were extracted. The sockets of these were curetted, the alveolus trimmed and the wounds packed with iodoform and orthoform gauze.



Extracting forceps



Dental operating instruments in canvas case

After these wounds had healed there still remained some teeth to be filled, scaled and polished. He was carried upstairs on a stretcher. These teeth were filled and his teeth were scaled and polished.

Impressions of his upper and lower jaws were taken, and partial plates made. These were inserted a short time before he was transferred to a convalescent hospital in the south of France. The physical condition of this patient improved remarkably after the removal of the infected teeth, and a curetttement of the sockets.

Peep, the pet of the hospital, wounded at Verdun, in left loin below



"Peep" and Emile

the twelfth rib, and in the right loin the bullet affected the spinal cord so that he was paralyzed below the waist. While in bed we gave him a mandibular injection to remove the lower left first and second molars. This necessitated considerable bone cutting with chisels and the roots were removed with elevators. Owing to the difficulty of working on the patient in bed, it took about an hour to remove the roots, the sockets were curetted and trimmed with bone cutting forceps and then packed with iodoform gauze. This was one of the most difficult cases of extraction which I had while in the hospital.

Cherri was wounded in the head at Verdun, while in charge of the captive balloon. He was sent to the hospital from Sens for X-ray examination and examination of his mouth and teeth. The X-ray revealed badly broken down second bicuspid, first and second molars on the upper left side. A tuberosity and infraorbital injection was made and these teeth extracted. In curetting the sockets of these teeth an opening was discovered into the maxillary sinus in the region of the first molar. This opening was enlarged and the maxillary sinus curetted. A large amount of broken down and disorganized material was removed. The sinus was thoroughly irrigated, and painted with iodine. This was packed with over twenty-four inches of one inch iodoform gauze. This was changed every other day until he left the hospital.

8 WEST FORTIETH ST.

(To be Continued in August)

WAS HE RIGHT?

Editor DENTAL DIGEST:

Will you favor me by having the following case published in your worthy journal. Lady age 26 years presented a deciduous cuspid (upper). I took out same and placed bridge attaching to lateral, and informed her that the bridge could be easily taken off and the permanent tooth extracted if it should erupt. The permanent tooth was lying somewhat crossways, the root was point upward and outward while the occlusal surface was pointing downward and inward. I knew that if this tooth should erupt that it would have to come out and as she wanted a bridge I inserted it. Am I on the right road?

F. N. R.



COMMON SENSE IN THE TREATMENT OF OUR PYORRHEA CASES*

BY ROBIN ADAIR, D.S., M.D., D.D.S., ATLANTA, GA.

The profession of dentistry is making progress in the treatment of diseased gums. Only a few years ago it was a common belief among dentists that Pyorrhea Alveolaris was incurable. Those who gave special investigation to this work were often called cranks. To-day, not only is the treatment a success, as now carried on in the majority of our offices, but preventive measures are being sought, found, and put into practice. Prophylaxis for oral conditions is the order of the day. Never in the history of the profession has such interest been manifested as when we to-day grasp the new ideas promulgated for preventive methods.

We are now entering upon a new element of development of a systematized, common sense technique for handling pyorrhea cases. The operator of to-day has perfect instruments with which to work; he has a full knowledge of all anatomical and histological structures involved, as well as entire knowledge of the bacteriological contents of the mouth, and the systemic disturbances associated with this disease. With all this knowledge at hand, we are prepared to produce such results as were never accomplished by the men who have preceded us.

The question of the classification of the various diseases of the mouth has been given most careful consideration by your essayist, both in his office practice and in teaching the subject in the dental college. It seems absolutely necessary to reach some classification, but up to the present time he has not been able to accept any yet offered to the profession. The suggestion is presented to you of the great strides we could make in this direction if those having these cases under treatment would secure photographs of the different classes of cases. By getting these different cases together and fitting the descriptions thereto, we might come to some definite understanding.

A COMMON SENSE BEGINNING

How do you begin your case? Do you just look in the mouth and tell the patient,—“Yes, you have a case of pyorrhea. I can treat it for — dollars. I can't tell whether several teeth can be saved, or not. I don't know how long I will have to treat you?” If this is your method of procedure allow me to make a common sense suggestion. First, that you quit making any such snap shot diagnosis or prognosis—it is fair neither to your patient nor yourself.

*Published in the Transactions of the N. J. State Dental Society.



Fig. 1
A copious flow of pus

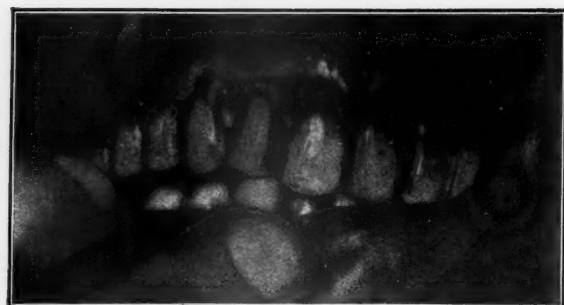


Fig. 2
Result of the so called serumal calculus

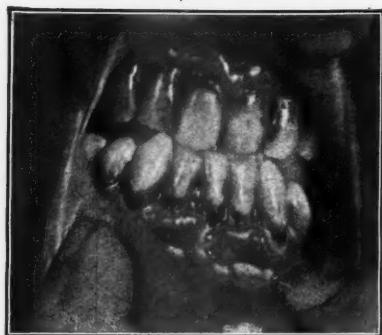


Fig. 3
Pus present on only one tooth though all teeth are involved

The mechanical expert or orthodontist begins his case by taking an impression and studying the case, and then gives definite advice as to what can be done. The doctor or surgeon would not make a snap shot diagnosis or prognosis—he would not diagnose a case without making a history chart. You can look at a decayed tooth and give your patient correct information, but you cannot do this in a pyorrhea case. The future of a patient's teeth, and his health may depend on your diagnosis, even in a simple case of gingivitis. Whether you believe in a truly local or a constitutional theory regarding pyorrhea, the common sense beginning is to make a history chart (which need not be extensive or compli-



Fig. 4
Hard glistening tumor-like growths with no pus present

cated) and in this must be included the result of an examination of the urine. Radiographs of all suspected teeth are not only a part of a common sense plan, but a positive requirement for this work.

With a history chart made up in accordance with above suggestions, the dentist does not have to "guess" or "think" to his patient. Any person worthy of your further treatment will not object to paying for such a diagnosis or prognosis. Some dentists receive as large a fee for such an examination as many do for the treatment.

For a sum less than five dollars a complete urinary equipment can be bought. If your specimens are sent to the professional laboratory, somebody "pays the freight" of about five dollars for each examination and you lose much valuable data by not doing the work personally. A

morning and evening specimen should be examined. Auto-intoxication with indican and acid urine are the findings in which you as dentists are most interested.

Let us illustrate the importance of such an examination. Dr. Smith is treating a simple gum inflammation which does not respond; the patient's mouth seems to be growing worse instead of better, and, dissatisfied, he goes to Dr. Jones who tells him that before he can give advice he must make a thorough examination with X-ray and history chart, the



Fig. 5
Causes of Pyorrhea—Salivary calculus

fee for this to be from five to ten dollars. This is done. The alveolar process is not involved. The urine shows high acidity and indican present. The following prescriptions are given to the patient.

Sulphate soda granular, Mercks 1 bottle

Sig: Take a teaspoonful in a glass of water one hour before breakfast.

Tablogistine Tablets 1 bottle

Sig: Take three tablets, three times a day after meals.
Drink a glass of water at same time

Sodoxylin 1 bottle

Sig: Take two teaspoonfuls in a glass of water, an hour
after meals.

Liquid Alboline (McK & R) 1 pint

Sig: Take two tablespoonfuls at bed time. Drink a
glass of water at same time.

The week following another examination is made. The urine is found to be normal. The mouth condition has cleared up with the same dental treatment used by the former dentist. The patient feels like a new man. Dr. Smith has lost a patient while Dr. Jones gets the whole



Fig. 6
Causes of Pyorrhea—serumal calculus

family. This kind of record might be extended to more complicated cases, ad infinitum.

Another obstacle which prevents success in the treatment of Pyorrhea Alveolaris, and one which I have never been quite able to understand is, the inability of the dentist to secure proper remuneration for pyorrhea treatment. If it were possible for every dentist in this audience to make as much money by the treatment of pyorrhea as by ordinary practice, he would treat every case that came under his observation. Whether you work on the given sum or hour basis, an estimate for pyorrhea service, properly figured, often amounts to more than the patient is accustomed

to pay for the usual dental operations, and I do not mean by this that large fees are to be named—just every day, common sense fees.

For the above reason, whether you work on the given sum or hour basis, I have found it well in practice to tell the patient that the treatment will cost such an amount and that our universal custom is to have

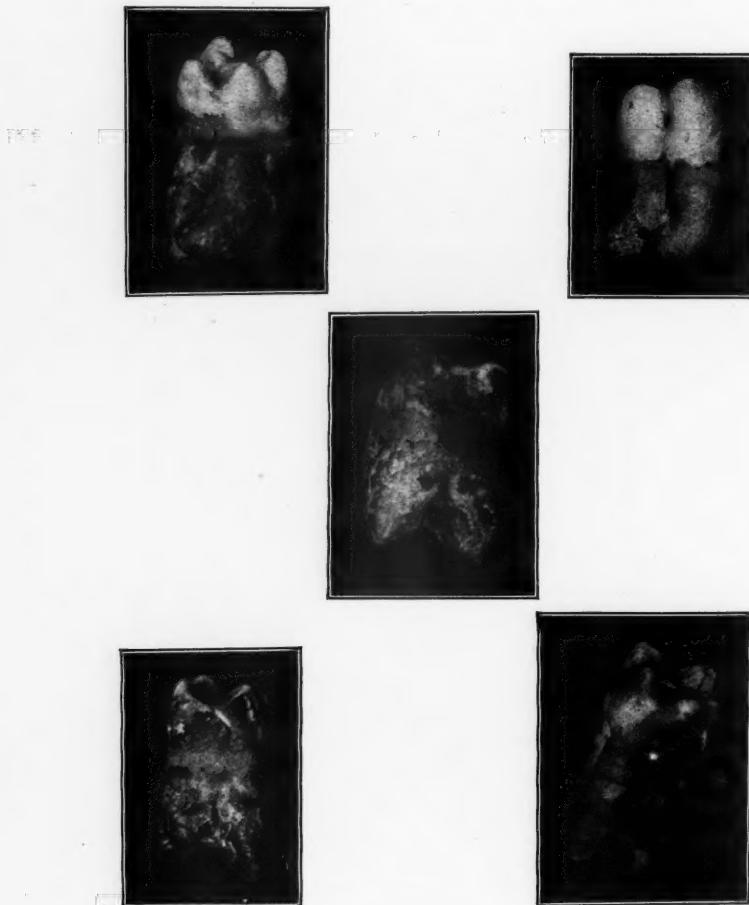


Fig. 6A
Causes of Pyorrhea—malformed teeth

part of the fee in advance. If you have never tried this method, you do not know the satisfaction that comes from so doing. If the patient is one to whom I know it makes no difference about the cost, I simply step to my desk, write out my estimate of the cost of the work, put it in an envelope, together with his engagement card, and hand it to him. If

he is not satisfied, he will then call up and break his engagement. Thus there is a perfect understanding between dentist and patient which prevents unpleasant discussion.

There are in office practice many little incidents such as this which enter into the common sense, successful treatment of Pyorrhea Alveolaris.

It is common sense to reduce swelling and congestion of gum tissues before any operative procedure. Some still claim that emetine will do this, but sometimes an iodine preparation is more effective and has the added virtue of staining the material we wish to remove and destroying the bacterial content of the pocket. This preliminary treatment is best



Fig. 7

Live pulps with apical erosion (?) Teeth so affected cannot be saved

made with a quill applicator, and should be continued daily for a week if necessary. This will positively prevent the systemic shock reported from operations on many teeth at one sitting.

COMMON SENSE IN REGARD TO INSTRUMENTS

Those who possess large sets of instruments soon narrow their selection down to a few. Therefore, it is advisable to buy points as needed, in order to avoid carrying a large stock of unused instruments. Some dentists can extract every tooth in the head with two pairs of forceps, while others of equal skill would require at least a dozen changes. So it is in this work—each operator has his favorite points. Some can perform a good pyorrhea operation with half a dozen points, while others may require a hundred instruments. In purchasing instruments, the preference should be given to the universality of use—if you find a point which can be used on several surfaces, it is to be preferred to one which will only work on one surface. Most instruments are too thick—it is a good idea to grind the back of the blade thin. Often old excavators, especially of

the spoon shape, can be converted into most excellent pyorrhea instruments.

It is hardly necessary to mention that all instruments should be sterilized at each operation; yet some of our best clinicians are woefully neglectful of this precaution, so a word of caution may not be out of place.

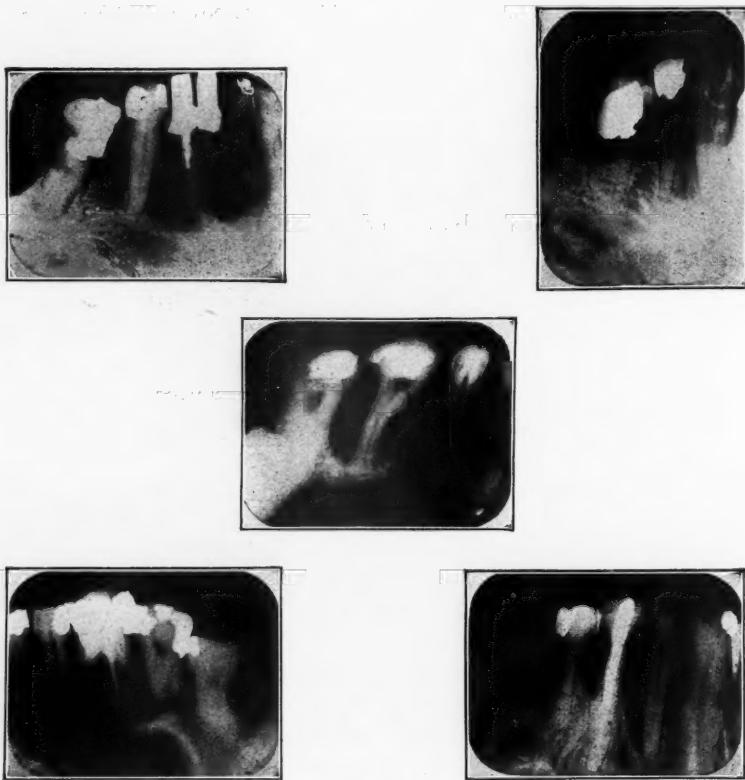


Fig. 8

The value of the X-ray examination to determine the extent and depth

A glass of shot with antiseptic solution for sterilizing instruments is, I believe, original with the essayist, and has proved of great value and efficiency.

(To be continued)

PARASITE OR PATHOGEN? THE PROTOZON

BY JENNIE CLARK MORRISON, D.D.S., MILWAUKEE, WIS.

CHAPTER I. INTRODUCTION

Those dentists who call themselves "practical" are apt to pass over such a paper as this calling it "impractical." Such men forget that their knowledge rests upon work of this sort, done by some "impractical" person, largely for their benefit.

Papers of this sort are not easy to write or to read, but when well written they are worth reading.

Before we can rise to our possibilities as practitioners of a specialty of medicine, we, as a profession, must very greatly extend our reading habits, and we must learn to accept thankfully, the results of all the studying that is done for us.—EDITOR.

What of the genus *Endamoeba*? What of the species *gingivalis** (later called *buccalis*), that animal micro-organism found so often in the oral cavity? Is it a pathogen, or is it a parasite? Is it a harmless saprozoan, or is it a bacteriolyte? Is it responsible for the rheumarthritis that so often accompanies the suppurative inflammation of the periodontal membrane? Is it the cause of intestinal toxinfestation?

Certainly the microbiologists and pathologists are aroused by these possibilities, and are engaged in the study of the habits of this protozoon. Certainly each discussion that is entered upon as to the cause of the pathogenic conditions found in the oral cavity, or as to the cause of systemic toxinfestation, finally takes into consideration the presence of each pathogen or of each parasite discovered by a microscopical examination of the parts. Certainly the presence of these *Endamoeba* are often detected, and a knowledge of the habits and the activities of these animal micro-organisms are of great importance to the diagnostician. One of the first questions that arises is, how do these endozoa obtain the necessary nourishment? Are these *Endamoeba* bacteriolytic? If it can be proved that they depend exclusively upon the numerous bacteria around them for their food, then certainly they are bacteriolytic.

They may be saprozoic, if they live entirely upon decayed animal matter.

They are parasitic when "they live either for a part, or for all of their lives upon the tissues or the plasma of their host to which they are attached, or into which they are introduced." They are pathogenic when they give origin to disease.

*Capt. Craig has raised a protest against the renaming of the *Endamoeba gingivalis*, fully described by its discoverer Gros, in 1849, and every fair minded student of Protozoölogy must heed this protest, and drop the term *buccalis* from the rolls.

Some of the Protozoa found in the oral and nasal cavities, may possibly be none of these; they may be certain free-living species that have been introduced into the body either with the food, or by accident. These latter, once free-living species, must soon resort, however, to one or the other above methods of procuring food, as soon as their natural food supply is cut off. That is, it follows quite as a matter of course that even the free-living species must, upon entering the host, soon become either bacteriolytic, or saprozoic, or parasitic, or, worst of all, pathogenic.

To discuss these activities at all intelligently, the history and the life-processes of this genus must be carefully studied, and in this study there is opened up an interesting field of investigation—the study of the habits of animal micro-organisms, as they affect the individual health and life of the human race.

The Protozoa, of which the Endamœba forms a genus, are described in the first few chapters of any zoölogy, or protozoölogy, that we may chance to open. They form the first phylum, of the many phyla, or tribes into which the entire animal kingdom is divided. They are the "first animal," in contradistinction to the Metazoa, or "after animal." They are the unicellular, as against the many-celled, more complex animal organisms, the Metazoa, with which we are more familiar. They constitute the primary branch, Phylum I in the classification of the animal kingdom now very generally accepted, the Vertebra, or Chordata, occupying the highest branch, or phylum.

To accept, then, the classification of a number of the leading zoölogists of the day, we read across the page, in describing the Endamœba as follows: Kingdom, Animalia; Phylum, Protozoa; Class, Rhizopoda; Order, Lobosa; Family, Amœbidae; Genus, Endamœba; Species, gingivalis or histolytica, or coli, or meleagridis, et cetera.

To sum up, as to classification, we may say that several authorities make this matter clearer, by beginning at the foot, as it were, with the species, and proceed upward to the genus, then to the family, then in turn to the order, to the class, to the phylum and last of all, to the kingdom.

We find, in the case of the Endamœba, the species *gingivalis*, the species *histolytica* and the species *coli*, differ somewhat in form, one from the other,—the difference is not so great, however, but that they can all be included in one genus, the Endamœba.

The genus Endamœba, with certain other genera of animal micro-organisms, differ somewhat from each other, but they have some points in common, enough to form the family Amœbidae (The term Gymnamebidae, [naked Amœbidae], has been used but that division is not generally recognized).

The family Amœbidae, with certain other families, unite to form the order Lobosa.

The order Lobosa, the order Foramenifera (or chalkmakers), and other orders, unite to form the class Rhizopoda.

The class Rhizopoda, and the class Mastigophora (or whipbearers, or Flagellata), with the class Sporozoa and other classes, unite to form the phylum (or tribe, or branch) Protozoa.

This one phylum Protozoa, with the many (usually eleven) phyla of the Metazoa make up the entire kingdom Animalia.

The scientific name, by which one animal organism is distinguished from another, is made up of the name of the genus, always capitalized, (as *Endamoeba*), together with the name of the species (as *gingivalis*),—thus making the scientific name, of the protozoon about which we are seeking information, *Endamoeba gingivalis*. The name of the species is never capitalized, and when speaking of any species we do not need constantly to accompany the specific name with the name of the genus, we say, simply, (*gingivalis*) or *histolytica*, or *meleagridis*, as the case may be. The name of the family is formed by adding “*idae*” to the root “*Ameb*” occurring in the generic term. The prefix “*Gym*,” to the family name of the Amœbida buccalis, meaning “naked,” is sometimes used to distinguish this family from others supplied with a covering.

Upon taking up a serious study of these Protozoa, and upon consulting any Protozoölogy or Zoölogy, we will find that, “Zoölogy is simply an orderly arrangement of all the known facts about animals”; and that many of the facts cited therein are already familiar to us. Kellogg & Doane tell us that, “We will deal with living material or with material that once possessed life, that once manufactured proteids. We will deal with organisms that are capable for the most part of their existence, of free locomotion.”

We learn that we shall find in these Protozoa, a certain irritability; and in the lower Metazoa, a certain sensitiveness, developing, as we proceed up the scale of animal life, into a nervous system, at first less, and then more elaborate and complex. We shall find that “These animal organisms demand living food material, or material that once possessed life,” and that this food materia is composed of complex, organic compounds: the proteids, the carbohydrates, the fats. We shall find that they inhale oxygen and exhale carbon di-oxide.

If it could be maintained that the vegetable organisms, on the other hand, needed a fixed position; that they showed an entire absence of sense organs; that they subsisted only on inorganic substances; that they invariably inhaled carbon di-oxide and exhaled oxygen, how marked would be the dividing line between the entire vegetable kingdom (whether

cryptogams or phanerogams) on the one hand, and the entire animal kingdom on the other hand. How simple would be the work of correctly classifying all living organisms. The work of the biologist, who studies both vegetable and animal life, would indeed be simplified. We find, however, that many of these points cannot be maintained, even when the organism is undoubtedly a vegetable organism, notably in the case of the bacteria and of many fungi.

Vegetable organisms, supplied with chlorophyl, show almost all of the above characteristics, and are thereafter more easily classified. They need a fixed position; they largely inhale carbon dioxide and exhale oxygen (under sun-light); and they subsist only on inorganic substances, on the simple elements (in solution) found in nature. With chlorophyl and with the sunshine, as agents, plants can build up from these inorganic substances,—from these simple elements Carbon, Hydrogen and Oxygen,—numberless complex substances known as carbohydrates and fats. Add nitrogen, and often Sulphur and Phosphorus to the Carbon, Hydrogen and Oxygen, and these plants can, and do, build up the proteids. As to the absence of sensation in species of this immense kingdom, scientists, generally, have maintained, that vegetable organisms are almost invariably lacking in sense organs, and are irresponsive to external stimuli; this, if true, would be a further distinguishing characteristic. But, now, Dr. Jagdiss Chunder Bose of Calcutta has invented an apparatus so extremely delicate, that he has been able to register plant sensations of heat, cold, shock, or pain, so that this alleged want of sensation can no longer be considered as a characteristic.

This leaves only one distinguishing line of demarcation, between these two great kingdoms, namely, vegetable life is capable of existing on inorganic elements, or compounds, but animal life cannot so exist.

Protoplasm, "The physical basis of life," then, is made up of these proteids, of carbohydrates, and fats, with some compounds of the chlorides, the carbonates, the sulphates, the phosphates, and water. These last compounds mentioned, the chlorides, the carbonates, the sulphates and the phosphates, are not the ordinary inorganic compounds of that name; they have been acted upon by that wonderful, vital force, metabolism, which is exerted everywhere that life is found, and they are transformed into vital compounds, as they enter into the composition of living tissues. All animal life, whether the most intricate in mechanism, as are many of the Metazoa, or whether it be the simple mass of protoplasm known as the Amœba proteus, or the equally simple mass, the Endamœba gingivalis, all require these complex substances for their food.

(To be continued in August)

NOTES UPON THE USE OF ETHER AS AN ANESTHETIC IN THE EXTRACTION OF TEETH

By G. LESLIE CURNOCK, L.D.S., LONDON, ENG.

Of late I have made considerable use of ether as an anesthetic for the every day extraction of teeth for patients and I increasingly find it more useful, and to some extent it is replacing N₂O in my daily routine. I have some prejudice against the use of local anesthetics, and very rarely use them, so when patients come to me wishing a number of teeth out, say three to fifteen or twenty or more, I put before them the advantages and disadvantages of N₂O and ether.

With the use of ether, using all proper precaution, as I shall describe hereafter, one is almost always able to promise the completion of the operation, however extensive, in one day, whereas it perhaps necessitates five or six administrations of N₂O, even when used with oxygen in the nasal method, to do the work.

I am one of those dentists who do not profess any speed in extractions, in fact look upon it as detrimental to the best interests of both the patient and the dentist too. A very similar argument applies to the extraction of very difficult roots and lower wisdom teeth. Most of my patients now agree with me in the use of ether, as it saves them repeated long and expensive journeys. I practise in the city of London, and few of my patients live within ten miles, many being much farther off.

I claim nothing original or remarkable in my method of procedure but I have reason to believe it is rarely used in quite my way.

I used to send my patients to a Nursing Home, but this, besides adding considerably to their expense, took me away from my surgery and was not very satisfactory.

In addition to two surgeries which I use for concerte, prosthetic and prophylactic purposes, I have obtained the use of another room, which I entirely devote to the use of ether cases, the only essential furniture being the chair, water supply, glass tables, etc., and a six by two and a half bedstead, with a good supply of blankets, pillows, rugs and a hot water bottle.

I always see my patient some days previously, and arrange to start the work at 9:30 in the morning, and I give them very full instructions in the way of preparing for the anesthetic, including the use of a mild purgative the day before and forbid absolutely all food of any sort on the morning of the operation. I ask my lady patients to bring with them a dressing gown or similar wrap, and a pair of bedroom slippers, the latter being a small matter, but being conducive to great convenience and com-

fort. Knowing what teeth I have to extract, I, of course know what instruments I shall require, so do not have to bother the patients with any further examination when they come, but have all these ready sterilized. On the arrival of the patient, my surgery-nurse-attendant (for want of a better word) conducts them to the ether room, they then remove their boots, cloaks, etc., take off their dress and corsets, and attire themselves comfortably in dressing gown and slippers. I arrange for an anesthetist to attend about ten minutes after the arrival of the patient, and with him at once proceed to the operating room, and start work. Whilst I am putting on my operating smock and finally sterilizing my hands, he examines the patient's heart with his stethoscope, and puts the patient at ease with a few reassuring words. He first uses gas and oxygen, quickly followed by gas and ether until a sufficient state of anesthesia is reached to allow me to operate; he maintains this for practically any length of time with the aid of a junker and bellows, using a mixture of chloroform and ether. I do not propose to describe the technique of my methods in this article, except to note this fact, I *always* operate with the pharynx plugged with a large gauze swab, this obviates any danger of any foreign matter getting into trachea. My nurse is able to render me great assistance by handing me the swabs and instruments and also manipulating an electric searchlight. As time is no factor at all with these methods, I can extract at leisure, and am able to do the least possible amount of damage to the soft tissues. As soon as the extractions are over, I swab out the patient's mouth, and with the help of the anesthetist lift her on to the bed, leaving her on her right side, cover her over with blankets and put a hot water bottle at the feet. I leave a swab in the mouth, the tail being outside the mouth, until the patient is able to expectorate. I am then able to quickly cleanse my hands, put on a fresh operating coat and return to my surgery to take up the ordinary cases of the day, leaving the patient in the charge of my nurse, who at the same time is able to clean up the room and collect the instruments for sterilization. I have found it quite possible to make appointments half an hour or forty minutes after one of these cases, thus spending only the minimum amount of time away from my chairside. At intervals during the morning I visit the patient to see that all is going well, the nurse remaining in attendance until the patient is able to rinse her mouth for herself. Two or three hours after the operation, the patient has a cup of tea or Bovril, whichever is preferred, after which they are able to wash and dress at leisure and prepare for the homeward journey. This they are generally able to undertake five or six hours after their arrival.

Managing these cases in this way I claim the following advantages: Firstly, the patient is spared expense and many attendances. Secondl^v

I am able to do all the extraction in one visit. Thirdly, I am able to make a constant supervision of the patient's recovery and yet carry on the ordinary chairside work of the day. Fourthly, with all under my own roof and everything to hand, I am saved the necessity of going from place to place.

There is nothing remarkable about these methods and having sometimes two or three cases in a week, one gets quite into the work. It is a good saving in mental and physical strain which more than repays the rent of the room.

I advise practically the same procedure for children, with the exception that in their case we use the mixture A.C.E. and I usually prefer to operate with the child lying on the bed rather than sitting in the chair.

Patients greatly appreciate the use of a private room, which room is not too suggestive of an operating theatre, but is made comfortable with a bright fire, a few pictures and a supply of fresh flowers.

In such times as these when time is of such great value, this method gives the patient *all* the advantages of a Nursing Home and yet enables the dentist to give a maximum time to the more ordinary chairside work.

The many words of personal and particular thanks I have received from patients convinces me that this method suits them as well as it suits me.

THE DENTAL INFIRMARY AT THE CITY HOSPITALS, BAY VIEW, BALTIMORE, MD.

BY L. P. HENNEBERGER, DENTAL SURGEON IN CHARGE

The Dental Infirmary is located on the first floor of the Alms House of the City Hospitals, facing almost due south, and has a most desirable unobstructed light from early morning until late evening.

The equipment of this infirmary is a combination Ritter Engine and Chair, Clark cuspidor, sanitary white porcelain lavatory with hot and cold water, electric sterilizer, compressed air for sprays, chip blower and abscess syringes, and everything necessary for all dental operations, which include everything except gold work; i.e. gutta-percha, cement and amalgam fillings; nerve extirpation and root canal treatment and filling, cleaning of teeth, pyorrhea treatments and extractions, antrum operations, removal of growth within the mouth, reducing of fractures of the mandible and maxillae, and the administration of local and general anaesthetics.

Naturally in a clinic such as is offered at an institution of this kind, the confidence of the patients and the elimination of pain is of paramount importance. Even the insane patient is docile when he finds out "it will

not hurt." To this end the author has devoted all of his energies, until at the present date even these patients return at regular intervals for examination.

To give an estimate of the appreciation of some of the insane for dental services, the author was tendered a check for a half-million dollars for the extraction of a single tooth.

The bulk of the extractions, which average nearly a hundred a month, are done with Locosthetic—a three-fourths of one per cent. cocaine solution.

Kalo-Kain, a one and nine-tenths per cent. cocaine solution is used for all nerve extirpations and difficult extractions. Of course, it is occasionally necessary that a general anæsthetic be administered. In this event one of the resident physicians administers the "general" assisted by a graduate nurse, and when all is in readiness the required dental operation is performed.

It will be readily seen by the record charts that nine-tenths of the operations are done under local anaesthesia.

The patients here are first admitted to the Hospital general, and are immediately assigned to whatever department their case demands.

Subsequently they receive thorough physical examination and if any dental work is required they are given a pass to the Dental Infirmary. Here their mouths are put in as good condition as is possible, and they are given a tooth brush and box of paste, accompanied by a little lecture on the care of the mouth and teeth, and the many advantages of oral hygiene.

Where surgical intervention is found necessary for the insane, the patient is presented by two guards for the operator's protection.

In all luetic cases the operator is presented with a chart giving the results of the Wassermann tests obtained in the Bacteriological laboratories, and in these cases wears full surgical attire of cap, gown, mask and rubber gloves. In all dental work done at this hospital, the author has the hearty coöperation and assistance of a most competent medical staff of 25 physicians, who are fully appreciative of the benefits of oral hygiene.

To give an insight into the amount of work which has been accomplished during this first year, the annual report of the Dental Infirmary is herewith given.

ANNUAL REPORT FOR 1916

Amalgam Fillings	69
Cement Fillings	98
Gutta-percha	29
Abscesses Lanced	10
Calculus Removed	228
Pulps Capped	?

Pulps Devitalized	11
Pulps Exirpated	19
Root Canals Filled	39
Teeth Extracted	861
Teeth Treated	168
Impacted 3d Molars	4
Pyorrhea Alveolaris	195
Gums Treated	169
Local Anaesthetics	217
General Anaesthetics	4
Examinations (6 mos. only)	398
Plates Made	10
Sequestra Removed	5
Broken Jaw Set	1
Growthths Removed	2
Porcelain Crowns	6
Antrums Opened	2
Gold Inlays Made	3

Total number of visits made by patients to the Dental Infirmary, 942.

Total number of operations performed, 2,546.

The Dental Infirmary is open every Monday and Friday from 9 A.M.
to 5 P.M.

A CASE OF GREATLY UNEQUAL RELATIONS OF THE UPPER AND LOWER JAWS, AND THEIR RESTORATION BY ARTIFICIAL SUBSTITUTES

By T. C. TRIGGER, D.D.S., AND H. H. WAY, D.D.S., L.D.S.,
ST. THOMAS, ONT.

With all due respect to the authors of this paper and the success they attained in this case, I am very sure that the chances of success in any case are greatly increased by the use of an Anatomical Articulator and the Face Bow; that for difficult cases the Adaptable is very much the most suitable.—EDITOR.

It has occurred to us frequently that there should be more attention given to plate prosthesis by the general practitioner, for there is abundant evidence to show that there are many artificial teeth worn that do not satisfactorily meet the requirements of the lost natural ones, nor are they constructed to carry out the demands of esthetic qualifications.

This is due, many times, to an inadequate knowledge of the proper scientific procedure in their construction, especially in the articular movements of the mandible, and the importance of obtaining an accurate occlusal fit to artificial teeth, so that their proper function can be carried on successfully.

In many instances we have deplorably failed to approach anything like the natural organs, even for purposes of mastication in the more simple cases, not taking into consideration the difficult ones, which from time to time we are required to do.

In recent years there has been much light thrown upon the scientific side of the question, much improvement has been made along the line of the ideal anatomical articulator; better forms of artificial teeth have been adapted, also we have become better acquainted with the requirements of accurate occlusion.

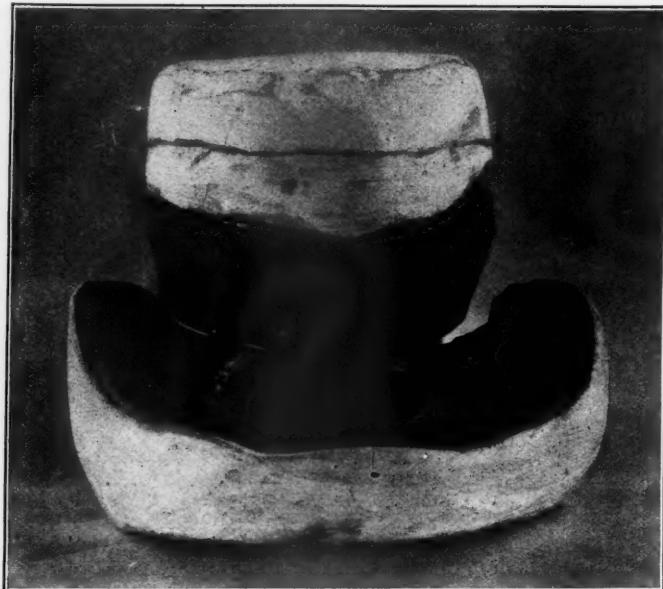


Fig. 1

Front view of models mounted on "articulator" with wax bite plates in position

We would venture to say that there is but very small percentage of dentists who practically, have not taken advantage of these improvements. The following question, therefore, presents itself: Is the dental profession keeping abreast with the improvements and, when adopting new features, are we careful not to abuse them?

Some years ago a representative in the House of Congress remarked: "The abuse of a thing is no argument against its use." This idea could be applied to any phase of dentistry.

The present case which we will describe is a very abnormal one and merits more than brief mention. In this instance it was for a lady

patient past middle life, whose natural teeth had been all removed early in life. Owing to the great absorption of the alveoli the jaws became more reduced in their outline and the muscles had more or less lost their function. Upon close inspection it was found to consist especially of an abnormally large under jaw, which was very broad at its posterior transverse part. It is, therefore, especially intended here to emphasize not so much the reduced size of the upper jaw simulating that of a child's, as it is necessary to call attention to the extreme breadth of the mandible, also an extreme protrusion.

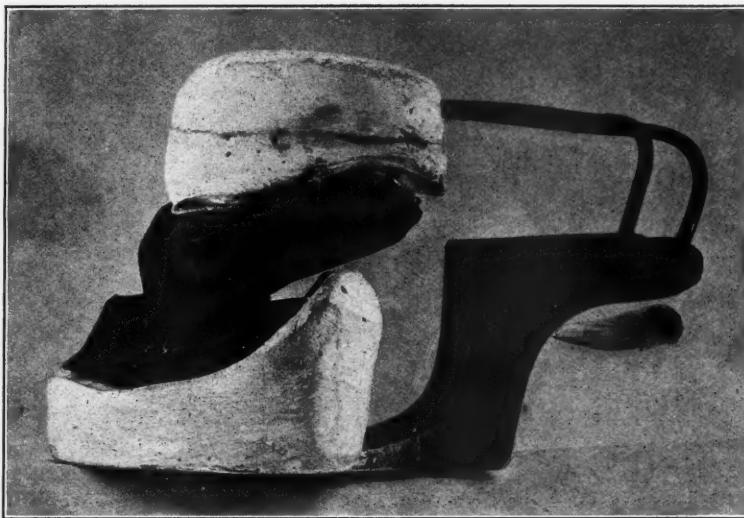


Fig. 2

Models on "articulator" showing wax bite plates with aluminum form in place above.
(Viewed from left side)

Apart from the extreme smallness of the upper jaw it was shown to have other contributing features, such as an exceedingly flabby alveolar ridge and the rugae area much broken in its outline the palatine part was very flat and hard.

When the two models were mounted on the articulator they had the general appearance of each actually belonging to different individuals.

Both impressions were taken of plaster in order to obtain a sharp outline of the model, as well as to avoid depressing the soft tissues. We find on using wax or compound impression there is not a uniform yielding force, as much depends upon the temperature to which it has been elevated and likewise to the amount of flow which it possesses.

We would state that no special improved anatomical articulator

or face bow was used, only that of a plane line one. In this case it is doubtful if, by using them, any advantages would be gained, as the results we obtained were most gratifying.

The wax bite was taken on a rigid metallic interbite plate. The operation was made with much care.

The upper denture was made first and the patient was allowed to wear it for a short time until it was under good control, before the lower one was made. In arranging the teeth of this set we were very careful to take into account the various movements of the mandible, which



Fig. 3

This view of models mounted on "articulator" with wax bite plates removed shows the extreme prognathism

are familiar to all plate workers. The forward movement of the mandible was indicated especially as it determined the occlusal contact, from its forward to backward movement, and after it reaches this point there is no moving backward of the mandible.

A natural denture must be constructed so that the teeth will occlude perfectly, for if it articulates well it means that the opposing sets must fit one another throughout, so that in the various movements, such as the resting bite, the forward bite or the sliding bite, they all maintain these contacts in such a way that the balance of the denture is secure.

In order to obtain an accurate grinding movement we allowed the patient to go through the movements of attrition well, until we were satisfied that the correct results would be obtained.

On account of the exceedingly small upper jaw and to overcome the

excessive mandibular protrusion, an aluminum "inset" was cast to restore the great loss of the tissues by absorption, and also to lessen the bulk of rubber which otherwise would be used. This casting was made to fit over the alveolar ridge throughout its length; over the buccal part it was carried a short distance on either side of the ridge, with a moderate amount of thickness of metal.

The labial surface was formed so that there was considerable amount of metal. When forming the base wax plate the casting was imbedded completely into it, so that when the denture was finished no trace of the casting was shown.

Owing to the excessive width of the lower jaw on the posterior part the bicuspid and molar teeth had to be placed considerably within the alveolar ridge, so as to engage with the corresponding upper ones. The posterior teeth were carried well back on the model; in this way we obtain a very good contact of both sets.

The rubber was vulcanized with much care with the dry process. The heating of the cases was carefully done, a full hour was taken in raising the temperature up to 300° F., and there retained for one hour and thirty minutes, to give the bulk of the gases a chance to escape from the thick part of the rubber.

We are pleased to state that with a careful study of the case at hand, we obtained such gratifying results that it repaid us for the trouble taken and at the same time rendered to the patient the best service that she was entitled to.

We cannot too strongly emphasize the importance in obtaining a correct occlusal fit to artificial dentures, for it is principally here that the secret lies in successfully restoring the lost organs of mastication by artificial means.

GOLD OR ALUMINUM LINING FOR VULCANITE DENTURES.—When the wax base plate has been removed from mould just before packing in the rubber, coat model with liquid silex and immediately sift on some powdered aluminum or powdered gold as you may desire. Now dissolve a piece of same kind of rubber used for plate, in chloroform and add double the amount of powdered aluminum to the bulk of the solution and by means of a camel's hair brush coat the model with same.

Allow sufficient time for the chloroform to evaporate before packing rubber and closing flask.

A lining prepared in this way is durable and cannot possibly pull off. The lining prevents any action of silex on the plate in vulcanizing, and the silex prevents the plaster from sticking to the palatal portion of the plate.—T. W. CROZIER, D.D.S., Christiansburg, Va.

ORTHODONTIA

SCIENCE VERSUS EMPIRICISM IN ORTHODONTIA

BY FREDERICK LESTER STANTON, D.D.S., NEW YORK

FIFTH PAPER

In the previous articles an attempt was made to show that the present methods of teaching and practising orthodontia were unscientific; that the results were often unsatisfactory and a needless amount of energy and time were consumed in the treatment.

The common goal of most dental operations is normal occlusion—the aim of orthodontists the world over is to establish normal occlusion for their patients. Normal occlusion can be defined and is understandable to the rank and file of our profession.

The teachers of orthodontia have failed to tell their students any method by which the form and dimensions of each dental arch could be determined in advance of treatment.

The teachers of orthodontia have failed to grasp the fact that appliances to move the teeth must be described in accordance with the known principles of analytic mechanics (a science well developed as evidenced by the engineering feats of our time).

No appliance to move the teeth from malocclusion to occlusion can be selected until the relative movements of each tooth are known.

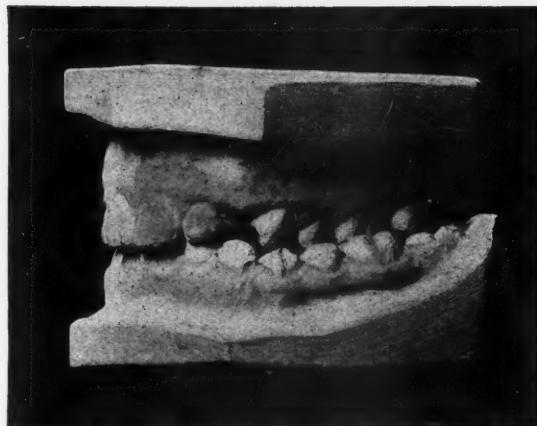
Each case of orthodontia should have maps of the malocclusion, a map of the predetermined occlusion. By a combination of these two maps the relative movements of all teeth can be shown in advance of treatment.

No appliance should be selected until the above maps are made. The human eye is unable to judge of these movements by the usual examination of plaster models.

The writer believes that orthodontia and prophylaxis will be the foundations of dental practice, and that orthodontia will be done in every dental office in the world.

Fig. 22

Left side of model showing the side teeth of the upper jaw occluding inside of the lower teeth. On the right side the bucco-lingual relations of the side teeth are normal. All dentists will recognize the difficulties of this type of case (a normal bucco-lingual relation on one side and a pronounced bucco-lingual malrelation on the opposite side).

**Fig. 23**

Occlusal view of models shown in Fig. 22. The difficulties of judging (by the eye examination of these models) the necessary tooth movements are apparent.



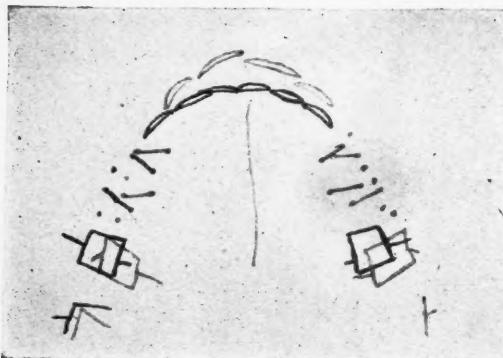


Fig. 24

Engineering survey of Figure 23 (upper teeth light, lower teeth dark).

On the left side lower teeth outside of the upper teeth. The bicuspids are also mesiodistally incorrect on the left side. Note on the right side what a good relation exists between the upper and lower side teeth.

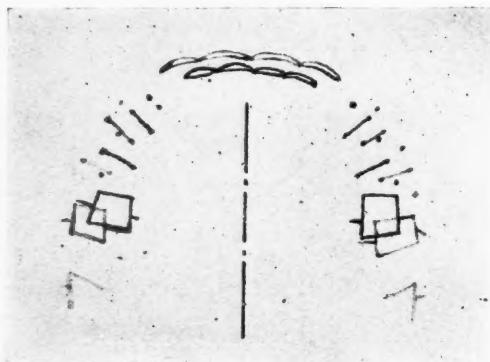


Fig. 25

Occlusion map determined by an engineer with an engineering instrument. Uppers light, lowers dark.

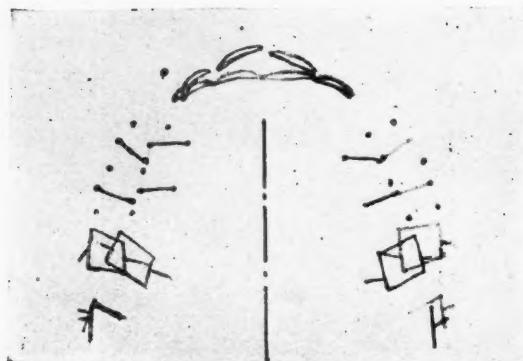


Fig. 26. Treatment map of upper. This map was given the general practitioner. At once he saw the necessary movements needed on the upper jaw to change the upper teeth from their original positions to the proposed arch as shown in the occlusion map. Dark original positions of upper teeth. Light proposed positions of upper teeth. Note principal movement of upper jaw. A symmetrical expansion principally in bicuspid region.

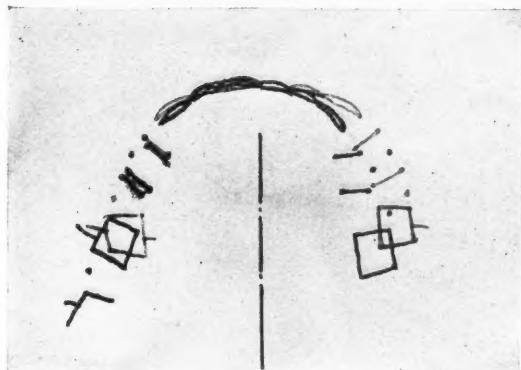


Fig. 27. Proposed treatment of the lower jaw. Dark original positions of the lower teeth. Light proposed arch of occlusion. Note on the left side the side teeth of the lower jaw are normally placed. Examine this side of the models Fig. 22 and observe the great disturbance of the bucco-lingual relations of these teeth. The lowers are normally placed, and this malrelation must be corrected by moving the uppers buccally.

On the right side a decided mesial and buccal movement is necessary. The reader will realize from the study of this map how inadequate an ocular inspection of the model would be when he realizes the apparently normal right side needs all of the movements while the left side, which appears so badly in the model is normal, bucco-lingually and mesio-distally.

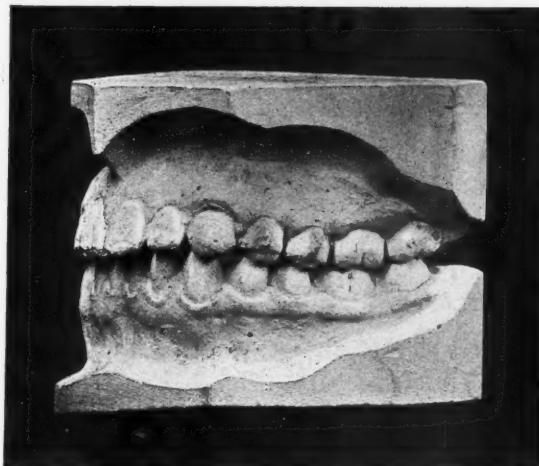


Fig. 28. This figure shows the result of the first stage of treatment as accomplished by the dentist using no engineering plan. While this model shows progress toward the goal of normal occlusion, still it is obvious that more work is necessary. The object of inserting the results of treatments at this stage is to show—

1. That the general practitioner of dentistry can make accurate tooth movements by means of predetermined arches.
2. By means of progress surveys made during treatments of cases orthodontic procedure is much simplified in that most difficult stage of treatment—the final approximation.

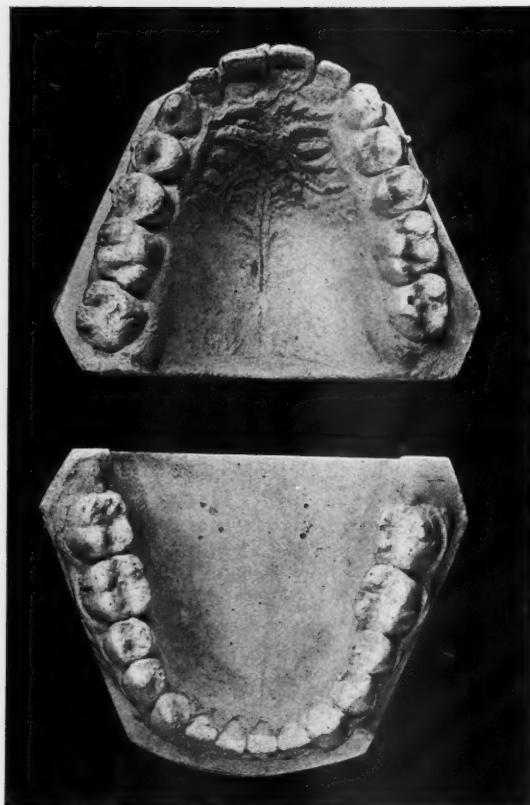


Fig. 29

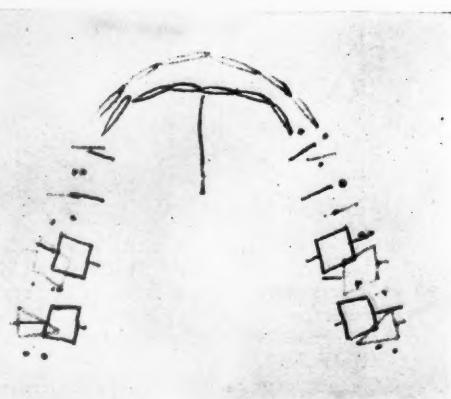
Occlusal view of model shown in Fig. 28.

Note the symmetry of the arches and the normal inclination of the teeth. At this stage of treatment the surveying process is invaluable as a guide to the final adjustments necessary to a speedy and accurate termination of the case.

Fig. 30

Progress survey of models shown in Figures 28 and 29.

Note improved condition of the left side as compared with original survey, Fig. 24.



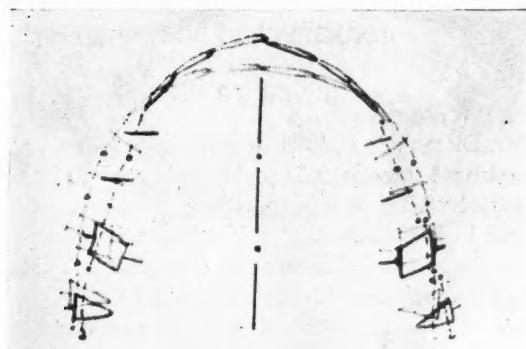


Fig. 31. Progress survey showing movements necessary to complete upper jaw. Dark portions of upper teeth surveyed from upper model, Figure 29. Light figures, final positions of upper teeth. Compare with Fig. 26 and see how movements have been toward the normal. The expansion still necessary in bicuspid region is clearly indicated to the operator.

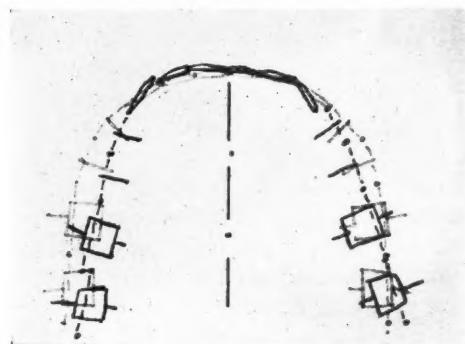


Fig. 32. Progress survey showing movements necessary to complete the lower jaw. Dark figures, positions of lower teeth surveyed from Figure 29. Light figures, final positions of lower teeth. Compare with Figure 26.

Note that Figure 26 indicates all of the movements in the lower right side—while in Figure 32 the lower side teeth need buccal movements on both sides.

Safe and sane orthodontia can be accomplished by the general practitioner when he has accurate maps of the necessary tooth movements and appliances designed to carry out the proposed movements.

From time to time there will be published in this series of articles, orthodontic treatments made by general practitioners of dentistry who have used the engineering plans and appliances.

The illustrations on the preceding pages represent models, plans and progress surveys. Treatment done by a general practitioner.

29 WEST THIRTY-NINTH ST.

CORRESPONDENCE

AN ANSWER TO "B"^{*}

Editor DENTAL DIGEST:

From an unbiased standpoint I should like to analyze for your readers the article entitled "A Prisoner in Indiana."

"A Prisoner in Indiana." The wording of his subject proves conclusively that the writer is a prisoner; that he is conscious of the fact that he cannot pass another state board; that he has made a failure in his own state; that with all these years of practice he has not kept abreast with the teaching of his chosen profession; consequently, he is a prisoner (fortunately for other states) in Indiana.

The second paragraph: He admits again that he is a prisoner in Indiana, and has been for twenty years. He would ask of the various states that they take down the bars and let him, a prisoner, come within their boundaries on a vacation, and while there, practise dentistry, that he may be able to pay the expense of the vacation.

I should like to know how he, a prisoner for twenty years in one state, and not having made sufficient funds to take a vacation, could expect to be turned loose in a new field and make the required amount in so short a time? He would readily find the people in other states are no bigger suckers than those at home. Therefore the passing of vacation laws would be of no benefit to him or anyone else.

I also conclude from this paragraph that he does not understand the meaning of the word "vacation." If he did he certainly would not want to take a vacation practising dentistry. I should rather judge that he has been "vacationing" in Indiana, and would like to go to Michigan about two months out of each year to practise dentistry. If he had been "practising dentistry" for twenty years in Indiana he would be glad to go to Michigan for two months, and leave dentistry at home, and forget it for the time being.

The third paragraph: For twenty years he has been wanting to try some new Western state. Does this statement not prove conclusively that he has not made good in Indiana? If he had made good he would not have been wanting for twenty years to come west. Furthermore, twenty years ago, and even to-day in some Western states, anyone with a limited amount of knowledge of dentistry can get a license to practise. He says, "No, I will stay in Indiana until the laws are made to suit my convenience."

^{*}Page 167, in March issue.

The laws of the various states are made for just such cases as this. The men who have been "practising dentistry" for twenty years have no fear of the law or the examinations, and all the states are glad to have them.

It is the practitioner, and not the state laws that is at fault.

For the benefit of the writer let me add that the people of the West are the same as the people of the East, and it requires knowledge, energy, and affability out here the same as it does in Indiana. And, too, we have a lot of men here in the same mental condition that he is in, always seeking new locations, and believing the fault is in the people and in the law.

My advice to anyone wanting to come west is this; if you have not made good at home, don't come west, for more will be required of you, and your chances for a complete failure are by far greater here than where you are. We have hundreds of men here to-day who would like to go to other states, feeling that they could do better there.

My good man, it is not the state laws. Analyze yourself. Indiana has some of the best practitioners in the United States, some who are enjoying large practices with big fees. If these men can do it you can if it is in you. If you can't make good in Indiana you can't make good in any of the other states. I trust that you can see the point and will avail yourself of the opportunity.

When all of the states have come to uniform requirement in regard to their laws and examinations this question will automatically adjust itself. Until then no one will be permitted to roam from state to state.

C. S. H.

AN EXPERIENCE WITH A MID-WESTERN STATE

Editor DENTAL DIGEST:

The articles appearing in the DIGEST and other journals, relative to "State Boards," leads me to write detailing my experience with a Mid-Western Board.

I began practice about 15 years ago, and obtained my license by simply registering my diploma. I never anticipated the need of another state in which to practise until my wife inherited a beautiful country home in the above mentioned state.

I have been for years a member of the various societies, and in my young innocence, I thought that it would be a comparatively easy matter for me to obtain a license any where under the flag. In fact I had all arrangements made to sell my practice to a young graduate. And all of my professional friends predicted easy sailing for me.

So after obtaining a reciprocal certificate from my home Board, I sent

my annual certificate of membership in the State Society along with my application blank, as I wanted to impress upon the examiners that I was an ethical dentist in good standing in my home state. It was with every confidence and an anticipation of a pleasant little outing that my wife and I started on our trip to the little University town where the examination was to be held.

We arrived on Sunday morning, the day before the examinations started and after resting from our journey, I went down into the hotel lobby and soon spotted a familiar "frat" pin and on introducing myself found another comrade in arms. Other introductions followed and I was soon acquainted with a number of candidates and right here I received my first inkling of the fate in store for me. One of the boys asked me if this was my first attempt and on my affirmative he asked if I really had hopes of getting through? "Why sure" I said, "why not?"

Well they told me a plenty; it seems that this whole bunch of birds had hit this board at least once before and several 2 or 3 times. My feet started to get cold and when we went down to dinner I had suddenly lost my appetite (and by the way I didn't recover it until several days after the examinations were over). My wife still ridiculed the idea that I might fail, simply because these young fellows just out of school had failed to get by. Why, didn't I have years of practice and untold experience? "Fail, why it simply couldn't be."

After a more or less sleepless night I presented myself to the examiners and was soon assigned a patient, for whom I must construct a gold crown. Well, I went ahead and prepared the root, made the band, carved and cast the cusp and thought that I had a really good piece of work, until I saw some of the work that these young fellowe were doing, their carvings were beautiful, I never remember having seen anything as good. If I could equal their work I wouldn't set the crowns, but keep them to look at.

Later when I was sweating over my cavity preparation (this board being strong for the Black Method) I took a look at some of the work being done by some of the other boys, and their cavities looked like the pictures in the text books. These boys were making cavities that I never could make; their work approached the ideal.

Right there I took a course in Retrospection and Introspection and realized that in my years of practice I had taken the "Easiest Way"; that instead of each day seeing an improvement in technic and execution, I had stood still or gone back.

What struck me as being worse was the fact that few of the dentists of my acquaintance could do the splendid work done by these boys just out of school.

I doubt if out of the 50 dentists in my home city 6 can carve a

cusp like those I saw or prepare a cavity à la Black. I am not exaggerating this, but I honestly believe that to be the truth. I was therefore not surprised to receive an "I regret" and I took the examination again a year later and received another. And while the need of a license in that state has passed in so far as I am concerned (as I am going to stay right where I am) yet it has become my big ambition to pass that examination on the actual merits of my work. Every day I am taking as much pains with each piece of work that I do as though I was going to "show it up."

If I am alive and nothing prevents I expect to take that examination next June and semi-annually thereafter until I get by or the Board stops my coming. And should I ever be successful in passing that examination, I will be the happiest man in the world for then I will feel as though I really had come back and was in deed, as well as in name, a Dentist.

Instead of the average dentist fretting because he is not allowed to roam at will from state to state, he should drop on his knees and thank his lucky stars that he is not forced to take an examination testing his efficiency to retain the one he already has.

State Boards are right and necessary. When the dental profession as a whole has earned the right to practise in every state, they will be accorded that right and not till then. And from the looks of mouths around this neck of the woods, that day is not coming soon.

From my experience with boards and from what I have observed in the experience of others, I will say that for the dentist who has progressed, who has developed his technic along the proper lines, he need fear no board examination. But for him who has followed the lines of least resistance the path is a hard and rocky one and one that is becoming more so every day, and justly so, for instead of the average dentist not having privileges enough, they have too many, when you consider the poor public who go to make up their victims.

VERITAS.

A RARE CASE

Editor DENTAL DIGEST:

A very rare case has presented itself to me.

A young man about 22 or 23 years old came to have some work done by me, and in my examination I noticed his upper cuspids were in lingual and torsal occlusion. On the left side I noticed he had a temporary cuspid. After asking him several questions I found that he had had one extracted where this one was and this was the second one to erupt in same place. Will ask to what the cause is due? This same occurrence has happened on the right side of his mouth in the cuspid region. On further questioning I found that this same thing had occurred to one of his sisters.

A. F. PETERS.

Editor DENTAL DIGEST:

Please ask Dr. U. F. whether he was kidding or not when he wrote "A Record of 12 yrs. Practice in May's DIGEST." If he was in earnest then please tell him I have open a good job for him, because I would be satisfied with his savings on my own practice which is considerably more than his. My word! How does he do it? His expense is 23% of his income. This leaves 77% to be divided into home expense and savings.

Expense	\$299.50
Savings	515.84
House Expense	563.75

or less than \$11.00 a week for his family. That's going some! Does he pay rent or does he live in a dugout?

On a \$10,000 practice, if he can put in the bank \$5,000 for me he can have half as a salary, rent and board for himself and wife free.

Lead me to him.

Yours,

"S."

A REQUEST FOR SUGGESTIONS

Editor DENTAL DIGEST:

Of late I have had a run of partly dead teeth in which the nerve was devoid of all circulation yet exquisitely sensitive to touch. The kind that does not permit of an arsenical application on account of the intense pain, and does not take up the cocaine under pressure anæsthesia, causing an extended period in order to remove the nerve before completion of the work in filling.

In several instances the teeth have rotted completely away with the nerve still too alive to work with, and have accordingly been lost.

Now just how to handle these cases is of paramount importance, and proper suggestions are in order to conserve just these conditions we meet so often in our daily routine of practice.

M. H.

If "P. E. M." will use Carmi-Lustro to polish corners that look like copper, he will be tickled.

"F. H. B."



OFFICE EXPERIENCES

A THREATENING LETTER

Editor DENTAL DIGEST:

I am enclosing a letter which may prove of interest in your "Experience" department.

This patient came to me wearing a partial plate my father made for her, probably twenty-five years ago. She had worn a porcelain crown on the upper left lateral and it had been out some time. The root was loose, badly decayed and covered by gum tissue and she wanted me to put a lateral on her plate over the root.

As her two central incisors were very loose and she also had some other loose roots, I advised her to have them extracted and let me make her a new plate.

She would have nothing done, but a lateral put on her plate, and I foolishly consented.

About a year afterward she came in with the two centrals (covered with calculus and green stain to the apex) in her hand, and said I was the cause of her losing them, and wanted me to make her a new plate free of charge.

I tried to explain matters to her but she would not listen to reason and of course I refused to make her a plate for nothing.

After several visits to my office with the same results she sent me the letter which I enclose.

"I toke the train right away and went and tould the Lawyer how you acted and whatt you sayd He sayd he felt so sorry for you.mother thaths why he send me up to you twise to se if you were not willing to do right when you saw with you own eyes whatt fearful damage you done to me not only ruin my Plate but all the suffering and the loss of my two good front teet you saying you wanted to make a new Plate and the way you worked it will add another 1000 to the damage he sayd we have already started a subskribton for expence and I got 2 \$5 yesterday everybody seem willing to put you out of Business so you cant ruin others like you

did me and when you mother raised such deman to son she have to stand it you want the Lawyer to go to you but the sherrief suits better."

I do not believe she ever consulted a lawyer and as I never saw her again the incident is closed.

She went to a neighboring town but the dentists there gave her little satisfaction as I afterward learned.

Yours truly,

_____, D.D.S.

A LETTER OF REGRETS

Editor DENTAL DIGEST:

I enclose herewith a letter from an old lady who thought she had a grievance. She came with a wreck of a bridge extending from the right lower second bicuspid to the second molar. The molar had completely decayed away, roots and all, not a trace of it being left. The morsal surface of the molar crown was represented by a hole the entire size of the crown: the porcelain facing of the first molar was broken off. But the crown on the bicuspid was fairly good and firm. I explained to her that I could do nothing but cut off the wrecked portion of the bridge, thereby saving the bicuspid with the crown upon it from further loss. She seemed to understand and acquiesced, and I did it. Two days later I received this letter.

"Sir:—After leaving your office on Sat. with my mouth sadly crippled by the needless sawing off of a \$50 bridge the full realization of what you had done come to me and I cried all the way home. My family were very angry at the desecration.

"I did not at any time hear you say that you must take out the whole bridge—and I must have been insane to let you destroy work which had cost me *hours and hours* of pain and anxiety and much money.

"You did not take the trouble to explain to me just what you were going to do or I never would have let you destroy my mouth. I am much worse off now than before—I did not suffer before—I do now and get *cold all the time*.

"I thought you were a Christian and that your work was to relieve humanity—build up and help them—not destroy.

"I would rather have paid out a hundred dollars than had you destroy that bridge connection. Of course I can never feel any confidence in you again and I have to pay the penalty of more suffering and much expense in order to get another bridge to save the few teeth I have because you did not care.

"I am so sorry I ever went to you. I never dreamed of you taking out my whole bridgework on that side of the mouth and I did not expect you to do me such a great injury as you have done."

EXPERIENCE WITH AN OLD ACQUAINTANCE

Speaking of mean letters from appreciative patients here's one, also some of my personal experience.

Early in the summer of 1915 I had a caller in the person of a minister, a former pastor of mine in earlier days. He was passing through my town and due to a poor schedule decided to stay over until an early morning train.

While mingling with his old acquaintances he decided to run down to a neighboring town to attend to some personal business matters.

Then he ran up to ask me for the use of my car as he knew my liberality. I couldn't refuse, but knowing the distance and the impaired roads and that he was accustomed to a different make of car, I just suggested that I would close up and carry him down.

Upon our return that night to show his appreciation of my liberality he said he would stay over the next day and give me some work professionally. This was very nice as most of we "country dentists" take a delight in having patients on our record from the cities, so I cancelled one or two of my engagements and gave him the time instead.

Upon examination I found two oversized cavities between badly lapped centrals and for some two hours I gave him the best that was in me, for I had to answer the usual routine of questions that is propounded by such learned men.

After all this, just to show my brotherly love I only charged him the "cut throat price" of \$4.00. He thanked me for my kindness and with his promise to send check immediately upon arrival home he left me with a hand shake that almost impaired my right hand for my day's work.

Months passed and two years rolled around, in the meantime I was sending him statements without his acknowledging receipt of them, yet I was keeping up with his address. Then I wrote him a personal letter as follows:

"My dear Bro. L.—I am at a complete loss to know why you have so ignored my statements. I recall you were to remit check upon your reaching home.

"Is it that you just can't meet your obligations, or is that your customary way of dealing with your friends? I feel that I am due the courtesy of an answer.

"Yours very resp.,

_____."

Answer:

"My dear Sir and Bro.—I am just in receipt of your very 'insulting letter' and am shocked at the tone of same.

"When I was passing through your town I was just from the bedside of my sick father and it was for old acquaintances that I stopped over and had you do my work. Now I had no idea but that your prices would be within the bounds of reason of the usual price, but I found you to be out of reason so I should have waited until I came home.

"Then last year my congregation was so poor that my church paid such a limited amount, and on top of this notes falling due that I made while sending my daughters to college.

"On top of all this I had some other expense, but Doctor, I merely go into detail so that you will understand my position, and not to excite your sympathy, for my twenty-five years of ministerial experience has taught me that I might as well go to Hades for ice as to try to appeal to a Methodist layman's sympathy.

Very brotherly yours,

_____."

I first thought of several hot answers and to receipt him in full, but later decided to ignore his accusations of unreasonable charges, but to impress the fact that I had never asked him for his business.

I also told him that he forgot that I had saved him a garage bill but it was through "brotherly love." However, the dental bill was a matter of business and I certainly would expect him to treat it as such.

This letter brought a check together with a good deal of sarcasm attached to it. I didn't regard it worthy of an answer but cashed the check, balanced the account and am living in hopes that my experience is in the past and not in the future.

F. L. H.

AN EXPERIENCE AND A SUGGESTION

Editor DENTAL DIGEST:

The following is an office experience which came to my mind as soon as I read your notice of the Department entitled Office Experiences.

A young man came in my office to have work done and asked me to

examine his teeth and tell him how much I would charge to fix them up in first class condition.

I did as requested and told him I would charge \$16.00. He looked greatly surprised but after a moment's hesitation asked me if I would take his check dated two months ahead. I asked him what bank he dealt with. He told me.

I did the work, after completing the job he made out a check as agreed upon, bid me good day and left office. As soon as he left I called up the bank and inquired about the check. The cashier told me the party had the money deposited and could not understand why he dated check ahead. We were not long in finding the reason. I felt pretty comfortably easy until a few minutes later, when the telephone bell rang and the cashier notified me that the party was there at the bank to draw out his deposit and that he was going to leave town. He (the banker) asked me to step down to the bank and present my check for certification in order that he would be obliged to keep my portion. On entering the bank I believe I gave my friend (the crook) a surprise nearly as great as he had ever got in his life. Am glad to say I got my fee; also learned from my friend (the crook) a good method for collecting dental fees. Have taken several checks (certified) since, dated ahead and have not failed in a single case to make good collections.

H. D. O.

CAN ANY ONE HELP?

I have a patient ready for full upper and lower dentures, but upon being seated in the chair, she is troubled so much with belching that it is impossible to obtain an impression. Of course, I know most of it is due to lack of mastication.

Do you know of any drug to administer to prevent the gas forming so rapidly? She has been treated by an M. D. since last September. Trusting you may favor me in the near future, I thank you.

Yours fraternally
D. L. P.

Editor DENTAL DIGEST:

Replying to F. J. T., page 191, in the March DIGEST. The writer has removed several lower double rooted cuspids. Also has in his possession two upper first bicuspids with three distinct roots, one lingual and two buccal. While these are undoubtedly "freak" teeth, yet where devitalization is necessary might prove very inconvenient if all canals were not fully cleaned and filled.—W. J. S.

DIETETICS AND HEALTH

DENTAL WORK IN THE INDUSTRIES*

BY LEE K. FRANKEL, PH.D., THIRD VICE-PRESIDENT,
METROPOLITAN LIFE INSURANCE COMPANY, NEW YORK

Mr. Chairman and Member of the National Society Council. It is with great pleasure that I come before you this afternoon as a new member to your family, perhaps the youngest member.

Yesterday afternoon I had the pleasure of going through the Ford factory. Among the interesting things I noticed there was the filling of water bottles, that is, five-gallon demijohns, and sending them to the different parts of the building. The guide that was conveying us around told me with a good deal of pleasure: "You know, Dr. Hyatt, we filter all our water before sending out for the men to use in the factory." I said, "Yes. I understand that many of our large cities are spending millions of dollars every year that we may have pure water. I also understand that our government is spending millions of dollars every year that we may have pure food. But, may I ask, what happens to that water before it gets into your workman's stomach? What does it pass through before it arrives there?" "Why," the guide said, "it doesn't pass through anything; it goes straight from our water bottles to the stomach." I said, "I beg your pardon; it passes through the mouth, and if that mouth is unclean and unsanitary, with broken down bone tissue, that is a poison to the human body, and with all the forms of bacteria that we find in the human mouth, what is the use of your distilling your water in your plant here and having it pure until it reaches the workmen?"

I have great ambition for your younger member of the Safety Council. We are learning to-day throughout this country. The leading men, like Dr. Mayo and others, are telling the world that the next great step in preventive medicine is attention to and the care of the mouth. I will now read Dr. Frankel's paper.

*Address delivered before the Health Service Section, Detroit, Mich., Oct., 1916.

EXTENT OF THE WORK

Effort has been made in the preparation of this paper to determine to what extent dental work for employees is being carried on in industrial establishments throughout the United States. For this purpose a questionnaire was prepared in which, among other things, the following information was requested:

1. Number of employees.
2. Age or other restrictions.
3. Kind of treatment given.
4. Charges to employees.
5. Number of dental chairs.
6. Other equipment.
7. Dental clinic hours.
8. Time given per patient.
9. Number of patients treated per month.
10. Number of dentists employed:
 - (a) Salaries.
11. Number of attendants employed:
 - (a) Salaries.
12. Report of work done.
13. Report of results accomplished.
14. Statement of cost:
 - (a) Equipment.
 - (b) Per year.
15. Percentage of cost borne by firm.
16. Radiographic equipment.
17. Educational work.

Additional information was obtained from the National Safety Council and the National Civic Federation. Data regarding detail work was obtained from twenty-seven establishments. The statements indicate that while as yet the care of employees' teeth has not been very largely taken up as a phase of welfare work, a number of industries are giving careful consideration to this rather novel phase of care of employees and in a few instances there has been a gratifying development.

As an indication of what has been done and what is being considered, excerpts are given herewith of the data at hand:

I. INDUSTRIES CONDUCTING DENTAL WORK AT COMPANY'S EXPENSE AND
ON THE COMPANY'S TIME

(a) *Cleansing, Examination and Filling:*

The Armstrong Cork Company of Pittsburgh, Pa.; the Emporium, a department store in San Francisco, Cal.; the H. J. Heinz Company of Pittsburgh, Pa.; the D. H. Holmes Company, Limited, a new department store in New Orleans, and John Wanamaker of New York report that they are giving complete dental service with the exception of bridge work,

to their employees. The company pays for the expense of the dental work, and the time which is required for the employees for treatment is likewise given at the company's expense.

The Armstrong Cork Company states that the time required for dental work averages an hour per patient. Treatment is given to about two hundred patients a month. It costs approximately \$5,000 a year to operate their clinic.

The Emporium has two rooms allotted to the dental department. The work done consists of cleansing, scaling, and polishing; cement, gutta percha, and amalgam fillings; treatments, root canal fillings, and extractions. The equipment consists of an S. S. White outfit, including chair, engine, cabinet, etc., together with such instruments as are necessary to carry out the work. The staff consists of one operator and an assistant, each of whom give three hours a day, from 9 to 12 M. Lectures are given during the year on dental subjects. Radiographic examinations are given when necessary. An average of 140 employees are taken care of per month.

In their main plant the Heinz Company has an average of 2,000 employees. Female employees are encouraged to report regularly for inspection of teeth. The company formerly employed two dentists. As a result of the past two year's work they now need only one. A follow up card system has been introduced. When more elaborate work is required the patient is advised to consult outside dentists. About 100 patients per month are treated. Treatment by the company's dentist is not compulsory. The clinic hours are from 9 A.M. to 4 P.M.

In the clinic of D. H. Holmes Company the dentist works two hours every morning. Treatment by the company's dentist is not compulsory. Lectures are given during the year on dental hygiene. The report of the dentist for the last six months shows that the teeth of a very large percentage of the 900 employees are being examined and properly attended to semi-annually.

In the John Wanamaker store in New York all employees under the age of 16 are required to have dental work done. After the age of 16 it is elective. The company averages about 300 patients per month.

(b) *Cleansing and Examination only:*

The Clothscraft Shops of the Joseph & Feiss Company, Cleveland, has a dentist visit the factory every Thursday morning. The dentist brings his own instruments. The company furnishes the dental chair, foot engine, etc. Careful record is kept of the teeth of each employee examined. Instruction is given in the proper use of the toothbrush. The company sells such brushes to the employees at 10 cents each. Employees are not urged to go to the company's dentist for repair work.

The majority of them do, however. The company believes that the dental work is as important as any work being done in the medical department and hopes in the near future to extend it materially.

The Kimberly-Clark Company, of Neenah, Wis., supplies toothbrushes at cost price to employees. The company operates four mills and employs one dentist in each mill on part time. Examination and prophylactic work is done. No radiographic examinations are made. Fifty per cent. of the dental bills are paid out of the funds of the benefit association attached to the plant. The average time given per employee is from ten to thirty minutes. The dentist reports that a much better service is being given by outside dentists due to the fact that the latter now know that their work is being inspected.

(c) *Examination only:*

The B. F. Goodrich Company of Akron, Ohio, examines the teeth of each new employee. If defects are found the employees are referred to local practising dentists. The follow-up system is in use. Occasionally it is found essential for the company's dentist to clean the teeth of employees. Where radiographic examination is necessary it is done in one of the local hospitals. Toothbrushes and toothpowder are supplied to employees at cost. The company is planning to install its own X-ray equipment. The equipment of the company cost, approximately, \$2,000. In the year 1915 21,606 employees were examined. Of this number 1,007 did not need dental attention.

The dental clinic is in charge of a full-time dentist, a full-time assistant, and a full-time nurse.

Sears, Roebuck & Co. of Chicago does no actual dental work except occasional emergency relief. Employees are referred to local dentists. In the exceptional cases of employees unable to pay dentists' fees a loan may be made by the company. The company employs one dentist, who devotes all of his time in meeting employees and examining them. The Colorado Fuel and Iron Company advises that the subject of dental hygiene is given attention at the company's hospital. Plans are now in preparation for the extension of this work to the mining camps. The preliminary work of examination will be done by trained nurses. Subsequently the dental work will be done by dentists in the employ of the company who will travel from camp to camp.

2. INDUSTRIES CONDUCTING DENTAL WORK AT EMPLOYEES' EXPENSE BUT
ON THE COMPANY'S TIME

In this group are included the Hood Rubber Company, Watertown, Mass.; the Larkin Company, Buffalo, N. Y.; Montgomery Ward & Co.

of Chicago; Macy's of New York; Lord & Taylor of New York, and the Forbes Lithograph Manufacturing Company of Boston, Mass.

The information received from these establishments shows that all of them are giving dental service to their employees. Practically all of them have dental clinics in which an employee, on the company's time, may have examinations made. The necessary prophylactic work, such as cleansing, and, if necessary, filling, etc., is provided.

The Hood Rubber Company formerly employed three senior students from the Tufts Dental School. They now have a graduate dentist, who comes each forenoon in the week. The company is planning for a systematic physical examination, to include the examination of the teeth and subsequent treatment either by the company's dentist or by an outside dentist.

The Larkin Company employs a dentist on a monthly salary. The dentist supplies his own equipment. The company furnishes supplies, such as filling material, etc. Employees pay for service which is charged them, the charge being made at cost. If necessary, any employee in good standing may have a loan with which to pay his dental bill. The loan is repayable at the rate of \$1.00 per week.

Montgomery Ward & Company employs four dentists, who do emergency relief work, extract and fill teeth, fit amalgam and gold fillings, crowns and bridges. The clinic hours are from 8:15 A.M. to 4:30 P.M. On an average 511 patients are treated per month. The operating cost for the first six months of 1916, exclusive of rent, light, and heat, was \$4,405.00, receipts from patients, \$3,446.00.

At Macy's in New York there are, on an average, 5,000 employees. Approximately 175 per month receive treatment. A dentist is in attendance six mornings per week from 9 A.M. to 1 P.M. and two afternoons from 2 P.M. to 6 P.M. The dentist receives a weekly salary of \$28.00. A regular scale of prices is charged: The cost of gold crowns varies from \$3.00 to \$4.50, gas extraction costs \$1.00, porcelain crowns cost \$5.00, gold fillings from \$2.00 to \$5.00. The dental service at Macy's is not conducted by the firm itself but through the Mutual Aid Association.

Lord & Taylor has a dentist's office with a dentist in attendance during the store hours. A nominal charge is made to employees for work done. The dentist receives no salary, his income being derived solely from fees received. Rent, light, and electricity are furnished the dentist without charge.

The Cincinnati Milling Machine Company allows employees time for the cleaning and examination of teeth. The company has furnished the equipment; the dentist is employed by the Mutual Benefit Association.

The Forbes Lithograph Manufacturing Company has no dental clinic

at its plant. It refers its employees to the Harvard Dental School. The company feels that it might be better to have its own dental clinic in its plant.

3. INDUSTRIES REQUIRING EXAMINATION OF TEETH AT ENTRANCE INTO EMPLOYMENT

In this group are included the Avery Company of Peoria, Ill.; the Crane Company of Chicago, Ill.; the Norton Company of Worcester, Mass., and A. Schrader's Company of Brooklyn, N. Y.

The Crane Company occasionally holds up an application for employment until the necessary work has been done.

The Norton Company, after the results of the physical examination made at entrance, advises employees to have their mouths put in proper condition.

4. INDUSTRIES CONSIDERING THE ESTABLISHMENT OF DENTAL CLINICS

Joseph Campbell Company of Camden, N. J., International Harvester Company, Chicago, Ill., and the National Lamp Works of Cleveland, Ohio, are considering the establishment of dental clinics.

5. INDUSTRIES JUST STARTING DENTAL CLINICS

The Colgate Company of Jersey City, N. J., is at present equipping a dental clinic for its employees. It will follow very closely along the lines of the Metropolitan Life Insurance Company. Dr. Thaddeus P. Hyatt of the latter company is establishing the clinic for the Colgate Company and planning its equipment.

(*To be continued*)

PROPER DIET FOR PROSPECTIVE MOTHERS

By WM. OAKLEY HAINES, D.D.S., WASHINGTON, D. C.

Milk, the *only* article of food which Mother Nature deemed wisest and best to furnish for the young of all her mammals, has in its composition the elements of the foods from which the human body is built.

Let the prospective mother partake of good milk and lots of it. A bowl of oatmeal or graham bread with milk (not all cream) at breakfast or anytime during the day or before retiring.

For regular meals, such things as fresh eggs, meat and potatoes, all fresh vegetables, and an abundance of ripe fruit.

Bonny-clabber, smearcase, whey, butter-milk and milk and the system will have quite enough lime salts for both mother and babe.

DENTAL ECONOMICS

CRITICIZING THE OTHER FELLOW'S WORK

PAUL S. COLEMAN, D.D.S., WILBURTON, OKLA.

How often have you, upon examining the mouth of a patient who has come to you for dental service made some slighting remark about the work which you find and which has perhaps been inserted by another dentist? You possibly have said harsh things about the other dentist and if it happens that the other man is just located across the street and has by some means roped in one or two of your best paying patrons, you are apt to be very severe. You lose sight of the conditions, perhaps, under which some of the work was done. As a matter of fact the merest excuse for a dentist, if given everything he needs in the way of equipment and materials, is nearly always able to turn out a fairly creditable piece of work if he is honest and takes the necessary time to do it. We are all apt to rear back and snort at nearly every other man's output and point out every defect possible in the hopes of impressing the patient with our own merits and importance and our own ability to do excellent work all the time and every minute in the mouth.

Ordinarily our snorting and criticism works just once or until the time your patient happens to visit another dentist; then it's all up, and usually the same thing happens and you are in the class with the man you have just been lambasting and your engine has backfired.

I once knew a young dentist who had worked his way through college and came out without a cent and very little of anything else. The weather was bitterly cold and he was out in the country trying to get some work to do in the smaller country villages. He had practically nothing with which to work and his vulcanizer had no thermometer. He made a plate and the only way he had of vulcanizing it was to put his vulcanizer on the fire and let it run and in order to make sure that it was thoroughly vulcanized he took up several hours of time. As the vulcanizer leaked he had a very brittle denture when completed. Dry heat had cooked it brown. He finished it up as best he could and promised himself that he would make it over as soon as he got enough money to repair his vulcani-

zer. Unluckily, however, this patient fell into the hands of a brother practitioner who made the job over and likewise expressed his contempt for the young man's ability. He didn't know the conditions and when this young man who happened to be an honest and well meaning dentist made a special trip out into the country for the purpose of making this job over at a later date, he simply had nothing to do but refund the money which he cheerfully did and which was right.

Upon another occasion it became necessary for me to remove a crown made just a week prior and which looked like anything but a crown. Inquiring into the case I found it had been made by the wife of a travelling dentist who was a drunkard and the wife was endeavoring to support herself and four small children by doing what she could under the direction of a drunken husband. Eventually this plucky little lady became an expert mechanical dentist and was enabled to help along in keeping the family while her husband visited the surrounding booze dives and reported home about once every two days.

Another time I was called upon to remove some fillings which looked rather strange to me and I found upon inquiry that a dentist had inserted them by taking a silver dime and filling it and then filing a piece of tin, amalgamating and inserting. This man told me that he had used his last dime in making these fillings and that he had no money and simply had to get to another place in order to see a sick sister who had since died and that he had made a refund when he had arrived at a better condition of affairs. The conditions were such that he could not do good work and he was out of material and money. Many of us have been in the condition where we had to buy just enough gold foil for a single filling, pinching hard in order to make both ends meet. The way to successful practices is paved with such cases.

I remember once having a carpenter make some wire window screens for my office. There were several to be made and each one missed fitting by about three inches and left that much space for flies and insects to come in. As I remember the case I paid him eight dollars for his work and didn't ask any questions but simply secured some small boards and nailed in between and waited. His wife died the next day and left him with several small children. I didn't know she was sick, but when I learned of it I knew that the carpenter couldn't do any kind of decent work with this on his mind. It often happens that the dentist has just such things to contend with either in bodily ailments, family sickness or perhaps other things we know nothing of—therefore when a person comes to you with work in the mouth which isn't just what it really should be don't be hasty in criticizing.

BUSINESS VENTURES

This dentist dislikes to have his name used because his bad investments offset any good ones he will ever make. Here is a story of two good ones.—EDITOR.

I attended a State Land sale in one of the western States, bought a quarter section of land at \$12.50 per acre, 1-15 purchase price down, balance in annual payments with 5% interest. Land now worth \$40.00 per acre, wouldn't sell for \$50.00. This land has raised first prize grains for two years in succession. Now have 100 acres under cultivation.

Bought a desirable residence lot of the North-West Townsite Co. in a live Western town (one that has been widely advertised), purchase price \$405.00 at \$7.50 per month, no taxes or interest, will finish paying on lot May 1917; no taxes for me to pay 'till 1918 (October). Have been offered \$800.00 cash some six months ago but hold at a thousand, also am cinching the adjoining lot, all preparatory to building a desirable home with plenty of "gang way" for the kids.

J. H.

A METHOD OF COLLECTION*Editor DENTAL DIGEST:*

I see in the April DIGEST that you want methods for collecting from "poor pay" people.

There is a method I have found which works very satisfactorily. I make it a rule in my practice to request persons whom I know to be "poor pay or dead beats" to make a deposit on the work when it is begun. If such a person tells me he hasn't the money with him but will run in a day or so later and make a deposit, I ask him if he would mind signing an order on his employer and in most cases he will do this.

I explain that we can then proceed with the work and not lose any time by waiting to make the deposit at the next sitting.

The form of order I use is as follows:

Name of town. Date—.

Smith & Son, Grocers. Address —.

Pay to the order of *C. L. Johnson* Ten dollars (\$10.00) and charge to my acc't.

Signed—Name of patient.

I then take the order to the grocer or whoever it happens to be and ask him to give me credit for the amount of the order. Thus the employer of the patient acts as a collector and has helped me out many times.

Yours truly,

W. M.

RECREATION AND INVESTMENTS FOR DENTISTS

By J. O. C., D.D.S., TEXAS

No wonder we are jealous, sickly, narrow, peevish and irritable before we reach middle age. If a man is to stay in four walls, breathing the germ laden air so common to such places in spite of all precaution of sterilization and disinfectants, it is time for us to begin to see to our own physical and financial welfare, as well as the welfare of our patients. We are going to give a brief prescription of our own compounding for this very malady we are all heir to, if personal experiences will be pardoned.

In the first place, we have squandered a nice little fortune speculating in real estate. Now we are waking up at 41, after twenty years' practice, finding ourselves with a good sized family to educate. Not being of the "Give it up" type, we are again giving our whole time to dentistry and its various phases and realizing what four walls twelve months in the year is doing for us, we begin to hedge to keep out of the common rut mentioned in the beginning of this paper.

Having left out of the financial wreck, an elegant home on a prominent street in our city, and other property and assets, we decided it would be foolish to get down to the niggardly 365 days of 10 hours each, in the office (or dental jail), notwithstanding our need for every dollar the office would bring for maintenance and education of a good sized growing family. We determined to avoid the dental rut, so we purchased a new, large 6 cylinder car of popular make, closing our office every Saturday and so notifying our patients, we began by spending every Saturday on Silver and Denton Creek. It was not long before our camp on the creek was attended by the family alone except early morning and late evening; the middle of the day my time was taken up in practice for the villagers of the small town near our camp, and until recently every Saturday has been full to such an extent that I have and am still getting my Saturdays out and have increased my practice from \$4,000 to \$5,800 for the last twelve months. Of course, considerable of this outside work was done in the laboratory at home. I have increased my practice, gotten acquainted with some mighty good folks who add to my future practice as my camp is only 30 miles from home.

I am getting fresh air, recreation, keeping out of the dental ditch and really lose only the time I spend attending the State and National Societies.

I hope this little paper, although only poorly written, may inspire some ditch ridden brother dentist to take new life, new hope, new manhood and pull out of the dental ditch.

PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.]

To MAKE STICKY WAX STICK TO CLASPS, BACKINGS, ETC.—Touch the spot with sandarach varnish and evaporate the varnish over a small flame.—D. W. BARKER, D.D.S., Brooklyn, N. Y.

To REMOVE MODEL FROM ARTICULATOR.—Use separating fluid on contact side of model, allowing plaster to come up on edge just enough to hold. When ready to remove use sharp knife around edge and model will drop off.—T. A. ROSE, D.D.S., Sioux City, Iowa.

INVESTMENT MATERIAL.—I have tried almost everything suggested for model and investment material and have found nothing that gives better results than clean sea sand with plaster for vulcanite or soldering. There is no patent on it.—J. E. PAULK, D.D.S., Sarsota, Fla.

METHOD OF RUNNING UP A PLATE WITH STEAM. (Closing the flask).—1. Use Donham flask and Donham spring clamp, or similar outfit. 2. Cut a piece of tin to fit inside of vulcanizer when the spring clamp-press is also in the vulcanizer. 3. Set empty flask in the spring and clamp-press. On top of this place the sheet of tin and above the tin, place the flask that you are running up. 4. Cover bottom of vulcanizer with water about one inch deep. 5. Place your clamp-press, with flask and tin in position, in the vulcanizer. 6. Place head of vulcanizer in position. (Do not clamp down). Apply heat. The tin will keep the water from bubbling up around the upper flask. And besides, the various benefits derived from the use of steam, your case will be ready in one-third the time.—W. E. BECKER, D.D.S., Naperville, Ill.

TO MAKE A MEDICINE CONTAINER.—Crandall alloy workers will find it profitable if they will order Crandall's alloy in one ounce bottles, remove contents to an empty alloy container, and place bottles in water and let remain for one hour, when labels will be easily removed. Sterilize on inside, place gum label on each bottle with typewritten drug thereon and you have the finest kind of a medicine container.—J. E. Ruzicka, D.D.S., Plainview, Nebr.

To SEPARATE TEETH ESPECIALLY WHERE THEY ARE VERY CLOSE TOGETHER.—Wrap the amount of absorbent cotton needed around the middle of a length of wide dental floss. The cotton should taper from the floss to a cone shape. Pass the floss between the teeth and pull it through until the cotton is in the interproximal space. Now tie the floss over the contact and you have a wedge that is easily placed and will stay.—F. H. ENTRIKEN, D.D.S., Walla Walla, Wash.

(Twisting a ligature wire around the contact points and leaving it for a day or two makes a satisfactory separation also.—V. C. S.)

QUESTIONS AND ANSWERS

Question.—I had a queer one put up to me lately by a patient and want some light. It appears the father had all superior teeth crowned and later stomach trouble developed. Upon advice of physician all were extracted "because the action of the saliva upon the gold formed an acid which caused trouble."

Can you advise me where I can obtain information upon just such a condition.—G. H. EPPLEY, D.D.S., Marysville, Pa.

ANSWER.—Either the patient or the physician has things twisted. The crowns could easily be responsible for his trouble if they were as ill-fitting and with such pulp and apical conditions as we often see. But there can be no chemical action of saliva upon gold.—V. C. S.

Question.—What would you do in the following case? "Baby 2³/4 months old, cavities on incisal edge of both upper central incisors extending well to the lingual surface. Patient complains of pain in the teeth and of course being so young it is impossible to do anything for him in the way of treatment. Any advice that would aid me in correcting this trouble would be greatly appreciated.—J. H. S.

ANSWER.—I see no reason why it should be considered impossible because of this child's age to apply silver nitrate a few times at intervals of two or three days, and then to excavate sufficient decay to permit the retention of copper cement fillings. This can surely be done without great difficulty unless the mother is an awful fool. Better prescribe a diet of hard toast, non-starchy vegetables, with meat every other day, potatoes or rice alternate days, no candy or sweets.—V. C. S.

Question.—This case is in a physician's mouth and he will not listen to a full upper plate but wants something done that will give him some satisfaction. I have thought of using Gilmore's on the cuspids and swedge gold over the ridges, a small strip across the palate and vulcanize teeth

to it. There is one fault to a case of that kind though, as he shows a good lot of the process back of the remaining teeth. Is what I have proposed the best in your judgment that could be done for this case?—W. E. S.

ANSWER.—I would advise the tube attachments to the cuspids in preference to the Gilmore. The Gilmore attachment in such a case with attachment at but one end, especially in the upper mouth, I find detrimental in that as soon as slight absorption has taken place the plate rides upon the attachments preventing adhesion by close adaptation to the mouth, while with the tube attachment the plate follows the supporting tissue as it shrinks.

Your suggestion of gold saddled with a narrow strip across the palate is fine. I would suggest, however, if he shows the gums that you stop the plate on top of the ridge and butt the teeth against the gums as in bridge-work.—V. C. S.

Question.—I have two cases on which I want some advice. An aged lady and a man came to me to have upper dentures made. I asked them several questions about their cases and they both told me that they lost their teeth several years ago from pyorrhea. They have no ridge at all hardly and the mucous membrane is very hard. They have never worn dentures at all. I have made four plates for the man and three for the lady and I can't get any suction on either one. I have taken plaster and modeling compound impression but can't get one to stay up at all and I have used all the skill and precaution that I know how to use, but get no results.

Please advise me as to the next thing or method that I should employ. I am a young graduate and am just getting a good practice started, therefore I don't want to fall down on these two jobs.

I will deem it a very great favor if you will give me some advice about these cases and tell me why I can't get a fit.—B. F. W., Garyville, La.

ANSWER.—Put a generous roll of soft bee's wax across heel of tray and carry up to firm contact with the soft palate. Cut wax away where it has made an impression of hard surfaces, e.g., condyles and hard palate. Place a small bit of softened wax at each cupid region and insert tray again. At the same time pull lip and cheek tissues downward all round; remove and shorten tray wherever muscles pull against it. Fill tray with very soft plaster and carry it quickly to place, getting firm contact of wax across soft palate first, then pressing on up until wax at cupid regions is resting firmly against tissue. Now pull lip and cheek muscles down as when fitting tray. Remove impression when set by pulling cheek muscles out and squirting a little water above margin. Pour with

Spence plaster and vulcanize a base plate which includes the complete outline of the impression, extending back onto the soft palate possibly half an inch. Try base plate in mouth for fit before finishing plate. This is the method advised by Dr. Geo. H. Wilson of Cleveland Ohio, for these cases and if correctly carried out, it works.—V. C. S.

Question.—Upon filling tooth with silver next to a gold crown, crown became coated with mercury. Is there any way to bring crown back to normal condition without removing and heating?—E. A. D.

ANSWER.—The best way is to avoid getting the mercury on the crown by painting same with sandarac varnish or cavity lining before insertion of filling.—V. C. S.

Question.—Will you kindly tell me of some good formula for a mouth wash to be used after extracting, which will be both antiseptic and will combat pain.—N. C. T.

ANSWER.—Saturate a large pledget of cotton with full strength solution of witch-hazel and lay it on the wound or have patient hold mouth full of hot 50 per cent. solution. Witch-hazel has very slight antiseptic properties, however, and for this purpose I would recommend a hot solution of listerine or liquor antisepticus (the same thing). Boric Acid—twenty grams; Benzoic—one gram; Thymol—one gram; Oil Eucalyptus one-half cc; Oil Peppermint one-quarter cc; Oil Wintergreen one-half cc; Oil of Thyme cc; Talc—twenty grams. Purified alcohol 250 cc;—V. C. S.

Editor PRACTICAL HINTS:

On page 189* I notice an article about packing rubber to make tight joints against the teeth, and an answer by Dr. Snow. I have over thirty years' experience in that work, and if any one thinks he can make tight joints by "flasking and packing red rubber," he is mistaken, it can't be done that way. But there is a method that I have used for many years that makes as tight a joint as is possible with rubber. If any one will notice, the pink rubber around the tops of the teeth is always tight, and the solution of the matter is to carry the pink rubber around the teeth, but not the pins. How many rubber workers know that pink rubber neither expands nor contracts in vulcanizing. Pink stays where it is put if the packing is carefully done, which in some cases requires considerable time. I make a solution of pink rubber in chloroform and before heating the flask for packing, paint the plaster where I want the pink rubber to stay. It is as easy as filling roots of teeth.—DR. E. B. DAVIS.

*March DIGEST.

THE BEST OF CURRENT THOUGHT.

[*International Journal of Orthodontia*, May, 1917]

Original Articles

The Deciduous Molars and Their Relation to the Development of the Jaws. By Charles R. Baker, D.D.S., Evanston, Ill.

A Study of Some Functional Inefficiencies of the Teeth Associated with Occlusal Anomalies. By Milo Hellman, D.D.S., New York City.

Facial Impressions and Casts (Part II). By Oren A. Oliver, D.D.S., Covington, Va.

Rodgers' Triangular Chart for Trimming Dental Plaster Models. By Frank C. Rodgers, D.D.S., St. Louis, Mo.

Orthodontic Habit-Culture at Home: An Ideal Gift to Your Children. By George Van Ness Dearborn, M.D., Ph.D., Boston, Mass.

The Relation of Radiography to Orthodontia. By William A. Ciffen, D.D.S., Detroit, Mich.

The Responsibility of Dental Editors.

The Commercialization of Scientific Societies.

Orthodontic Appreciation.

The Value of the Orthodontist in Military Service.

[*Oral Hygiene*, June, 1917]

Contents

Metropolitan Life Insurance Company Welfare Work. By Wm. W. Belcher, D.D.S.

The O. T. Johnson Public School Dispensary, Los Angeles, Calif.

Professional Morality and Professional Business. By Edmund Noyes, D.D.S., Chicago, Ill.

The Man Who Keeps His Word. By Frank Crane, D.D.S.

Facts and Figures. By Edith Sabin Roberts, Warrensburg, Mo.

How to "Acquire the Habit." By J. H. Stritch, D.D.S., Ware, Mass.

The Drug Store. By Dr. Sigmund Epstein, New York City.

School Dentistry—Some Suggestions. By William Fisk, L.D.S.

Dental Legislation at Geneva. By Dorothy Richardson.

Municipal Dental Clinic.

Brief Suggestions. By Walter F. Lewis, D.D.S., Long Beach, Calif.

Information Relating to Dental Reserve Corps Appointments of the Army.

Eliminating the Smoke Nuisance. By C. Antoinette Wood, Brookline, Mass.

The Forsyth Loving Cup Fund Report.

Correspondence.

Things We Can Do to Help.

A New Standard in Dental Teaching.

Note and Comment.

Funnies.

[*Dental Items of Interest*, June, 1917]

Contents

Novocain-Suprarenin (Syn.). By Emil Specht, D.D.S.
An Explanation of How the High Frequency Violet Ray Apparatus Produces Its Effects.
By Dr. Geo. H. Reed.

American Society of Orthodontists. Discussion of Paper by Dr. H. A. Pullen, entitled
"Control of the Overbite in Treatment of Class II Cases."

A Compound Cementoma. By Benj. Goldstein, L.D.S., R.C.S.

Hygiene of the Bucco-Dental Cavity as an Important Auxiliary for the Prophylaxis of
Incipient Bucco-Pulmonary Tuberculosis. By Ernesto A. Dam, D.D.S.

Local Anesthesia. By Dr. Arthur E. Smith.

The United States Indian Service Field Dental Corps. A New Field of Activity in Which
Physician, Dentist, and Teacher Collaborate. By Fdo. E. Rodriguez, D.D.S.

Legislation in Regard to the Army Dental Corps.

[*The Dental Cosmos*, June, 1917]

Original Communications

Malocclusion as a Problem in Pathology. By Edward C. Kirk, D.D.S., Sc.D.
Report of a Case of Composite Odontoma. By Harry B. Shuman, D.M.D.
A Study of the Relation of Dental Conditions, Biting Force, and the Hand-Grip. By
A. Leroy Johnson, D.M.D., and Hugh K. Hatfield, M.D., D.M.D.

Pyorrhœa Alveolaris. By Charles Keyes, D.D.S.

The Dentist Before the Law: An Analysis of the Legal Aspect of General Anesthesia in
Dentistry. By Henry Schwamm, D.D.S., LL.B.

Regional Debility in Riggs' Disease. By M. H. Cazier, M.D.

The High-Frequency Current. By Dr. W. H. Perry.

Extraction of the Deciduous Teeth. By Rafidin Ahmed, D.D.S.

The Uses of Holes in Impression Trays. By Isidore Clifford, L.D.S.

The Colleges and the State Boards—Correspondence.

Possibility of Deception in Compared Radiographs.

Eastern Association of Graduates of the Angle School of Orthodontia.

Harlem Dental Society, New York City.

Northeastern Dental Association.

Dedication of Rochester Dental Dispensary (gift of Mr. George Eastman).

Our Golden Opportunity.

Dr. John W. Meng.—Obituary.

In memoriam—Dr. Isador Lett.

Announcement of death—Dr. Frank Holland.

[*Pacific Dental Gazette*, May, 1917]

Original Articles

Some Essential Principles in the Construction of Crowns and Bridge Abutments—Illustrated
with Lantern Slides. By Frahm.

A Method of Making Porcelain Inlays without the Use of Foil. By Schroeder.

Which Form of Pyorrhœa Alveolaris Do You Cure?—Editorial.

Preparedness League of American Dentists, San Francisco Sectional Unit.
 Pacific Coast Society of Orthodontists.
 Plate Prosthesis. By Hoff.
 Oral and Sinus Surgery Under Nitrous Oxid-Oxygen Anesthesia in the Forward Inclined Sitting Posture. By Denman.
 Oral Hygiene and Its Relation to Public and Individual Health. By King.
 The Influence of Dietetic and Medicinal Measures Upon the Calcium Metabolism of Rachitic Children. By Gerstenberger.
 Variations in the Clinical Picture of Pyorrhea.
 Elimination of Defective Dentistry in Oral Prophylaxis.
 Objections to Root Amputation.
 Other Conditions Calling for Root Amputation.
 An Experience in Extracting.
 Neuralgias of Dental Origin.
 Should We Let Well Enough Alone?
 On the Etiology of Pyorrhea Alveolaris.

[*The Dental Summary*, June, 1917]

Regular Contributions

Dental Service in the Army. By Myron T. Herrick.
 Partial Denture. By Morris Greenbaum.
 An Easy Method of Making a Bicuspid Richmond Crown. By Oscar Miesse.
 The Use of the X-ray in Dentistry. By George F. Thomas.
 Showing Patient Without Mandible. By C. C. Scott.
 A Clinicopathologic Study of Early Malignant Conditions of the Face and Mouth. By John W. Means and Jonathan Forman.
 How to Construct a Well-Fitting Gold Crown. By Leo Atkinson.
 An Experimental Research into the Nature of Nitrous Oxid and of Ether Anesthesia. By George W. Crile.
 Some Mechanisms Underlying Oral Infections and Their Consequent Localized and General Lesions. By Weston A. Price.
 Removable Bridge Work. By J. O. Zubrod and R. J. Morris.
 Gold Crowns. By P. A. Gould.
 President's Address. By O. A. Van Kirk.
 Preparedness League of American Dentists—Cleveland Unit is Making History.
 A Résumé of the Organization of the Preparedness League Units in the State of Ohio.
 The Bacteriology of Alveolar Abscess. By L. K. Canouse.
 Oral Surgery. By Hugh W. MacMillan.

[*Medical Record*, January 20, 1917]

THE PROHIBITION OF ALCOHOLIC BEVERAGES

An editorial has appeared in the *Lancet* with reference to this much talked of subject, and since England is considering prohibition it is interesting to note that a memorial has appeared in the public press with a thousand influential signatures attached, asking the Government to suspend all drink licenses throughout the kingdom for the period of the war. A plea is hereby made to put the nation at its full strength by removing "a danger which holds back the hour of early victory and throws a shadow

over the vision of peace." With the weakening power of alcohol removed, the signatories claim that the national effort against the enemy will gather increased strength. It is not drunkenness alone which endangers the supply of munitions, but, according to the memorial, "the constant sapping of men's energies by alcohol." The appeal is not made by temperance reformers as such, but by thoughtful, earnest men in every range of business and professional life. Alcoholic liquids may be taken as food, medicine, or luxury. About an ounce of absolute alcohol is the limit which can be burned up in the body within twenty-four hours without a paralyzing or narcotic effect and without the appearance of unchanged alcohol in the excreta. This amount supplies about as much fuel as one ounce of margarine—that is 200 calories. One ounce of alcohol costs, in light wines, about twenty-five cents, but during these war times forty per cent. must be added to the original price. One ounce of margarine costs less than ten cents; so that alcohol taken as a food is wasteful. As a medicine alcohol has its place, which place is not as important as was once supposed. In normal times the claim of alcohol as a luxury cannot be overlooked. One brilliant man has said that wine used in moderation adds to the agreeableness of life, and thus adds to its resources and power. At present the young men of England are not living under agreeable conditions, hence the rest of the population must forego this happy state as their contribution to the cost of war. Alcohol, however, is and must remain unimportant in the arts and manufactures and pharmacy. In Germany, before the war, one-half of the alcohol produced was consumed for various technical purposes. Alcohol, if prohibited as a luxury, may thus remain as a necessity.

[*Medical Record*, January 27, 1917]

ADDING TO THE DOCTOR'S BURDENS

In the *New York State Journal of Medicine* we find the draft of a new medical practice law which its introducers hope will be passed by the Legislature soon. It is a joint bill drawn by the State Board of Medical Examiners and a Committee of the Medical Society of the State of New York and is said to have the approval of the Board of Regents and the Council of the State Society. The object of the law is to make it easy to discover and suppress all illegal practitioners, and its effect will be to impose an annual tax of \$2.25 upon every legal practitioner and to subject him to the nuisance of annual registration under penalty of being deprived of his living.

According to the proposed new section of the law every physician must annually present to the secretary of the State Board of Medical Examiners

a request for renewal of his license, this request being accompanied by an affidavit setting forth that he has been regularly licensed to practise medicine in the State, giving the date and number of the license, that he is himself and nobody else, giving the county in which he is registered, and that his license has never been revoked, annulled, or suspended, together with such other facts as the Regents may deem necessary. After getting these statements legally attested, the physician must forward his application together with a fee of \$2.00 to the secretary of the board. This application must be presented on or before September 1 of each year, under a penalty of \$1.00 additional for each thirty days' delay up to January 1. After this date the delinquent will be summoned to appear before the Regents at an appointed time and place, and if the explanation of his failure to have renewed his registration is not deemed satisfactory by the powers they will suspend him from the practice of medicine for the balance of the year, or may revoke his license as seems best to them.

The Medical Directory contains the names of 14,224 legally qualified practitioners in this State, each and every one of whom will be put to the annoyance, loss of time, and expense of renewing his license every twelve months, in order that a few miserable quacks may be detected and put out of business. It is safe to say there would not be fifty exposed by this means who could not be found just as well by the legal machinery now in use for their suppression.

[*Medical Record*, April 21, 1917]

(*Society-Report*)

ARTIFICIAL RESTORATION OF LOST OR MISSING TISSUES IN CONGENITAL CLEFT PALATE

Dr. Vethake E. Mitchell of New York City made this presentation, which included a description of his apparatus and the presentation of patients. He stated that while mechanical appliances for cleft palate were not new, the appliance which these patients were wearing was *new* in principle. This principle was, that by restoring artificially all the missing tissue, to as nearly a normal condition as possible, he had restored the defective speech mechanism in such a manner as to permit normal functioning of these tissues. It must be understood that the appliance only restored the mechanism; improvement in voice and speech came through persistent coöperation of the patient and instruction by a thoroughly competent teacher. Patients were trained through the Sevenfold Pathway of Voice, of the Miller Vocal Art Science procedure, to coördinate the muscles of the body and to harmonize its sympathetic nervous system. This brought about a perfect equilibrium of the

forces of the body, and finally resulted in automatic control of speech and voice. Dr. Mitchell gave a lantern slide demonstration showing the construction of the appliance and how it could be adapted to the various forms of cleft palate, as in one instance in which the vomer bone and the soft and hard palate were both missing, another in which the cleft extended only through the soft palate, etc. He stated that the soft palate was the most important organ concerned in the shaping of the resonance chambers. Its muscular activity, while delicate, had quite a range of movement. To accomplish this in the artificial piece, the palate portion, made of hard rubber, was attached to the posterior border of the hard palate by means of a specially constructed hinge. It was shaped to fit the cleft and had thin flanges on either side to rest upon the upper surfaces of the remaining palatal tissue. Dr. Mitchell presented three patients, and with the assistance of Mrs. Henriette Gillette, the assisting teacher for the defective speech department, demonstrated the results that had been obtained. These patients showed the automatic usage of the speech muscular adjustments, by repeating the Miller Vocal Art Science scales of vowels and consonants, and by singing and reciting. They had been wearing the appliance from one to two years, and had received instruction for periods varying from six months to a year. In the third patient presented, a girl of twelve years, it was difficult to detect any deviation from normal speech, and in the others the speech defect was but slight.

Dr. Reginald H. Sayre said that Dr. Mitchell's presentation should not be allowed to pass without discussion. The results which he had obtained with this appliance were vastly better than those which surgeons had been seeing after operation. Operation often produced an immovable palate and a too small, occluded, nasal cavity.

Dr. Howard Lilienthal said that he had seen so many instances of the satisfactory application of prosthesis that he had, except in rare and selected cases, refused operation in cleft palate. The operative procedures were dangerous to life, while the application of apparatus was not attended by mortality. Even the good operative results in children were apt to be most unsatisfactory when the parts developed with growth, the arch becoming stretched and tense so as to interfere with the speech mechanism. Dr. Lilenthal said that in 1885 he had seen an obdurator made by Dr. Baker of Boston, in which a hollow silver bulb had been used instead of the hard rubber. The bulb was hinged to the anterior part of the appliance as in Dr. Mitchell's apparatus. The artificial vomer of Dr. Mitchell appeared to be a distinct advantage. Dr. Lilenthal reported the case of a soldier in the militia at the time of the Spanish war. Dr. R. Ottolengui of New York had fitted an appliance for com-

plete cleft palate. This man had been accepted after examination and with the full knowledge of the defect because the examining surgeon considered the man in no sense disabled by his deformity. The voice and articulation were perfect.

Dr. Mitchell, in closing the discussion, said that when he was invited to appear before the society he had hesitated because he had known that there was an antagonistic feeling between surgeons and dentists in regard to the treatment of cleft palate, and he wished to assure them that he did not share in that feeling, but was working for the sake of humanity and to assist the surgeon. He had had three cases of cleft palate sent to him by surgeons either because they were inoperable, or because better results were to be hoped for from a mechanical appliance or because the patients or their families had refused operation. The third patient that he had shown was able to speak better than the older ones. She had been taken to Dr. Abbe when three months old and he had advised against operation, and there was no question but that better results were obtained by this appliance than could have been hoped for from operation. The speaker said he was aware that good results had been obtained by operation in cases of cleft palate, and if an operation was successful it was better than wearing an appliance, but one could not be sure of the result of surgery in advance. Again, when the patient was operated on the deed was done and there was not much more to be hoped for, while the appliance had the advantage that it could do no harm. There had been a very large number of appliances and methods for restoration of voice mechanism, but there were objections to them, as, for instance, in the one to which Dr. Lilienthal referred, the large silver bulb. A large bulb in the posterior nasal space spoiled the resonance. Of course one did not get the best result in all cases with the appliance which he had presented, because a great deal depended upon getting the coöperation of the patient in the voice training.

[*New York Medical Journal*, March 24, 1917]

BRAIN VERSUS BELLY

Throughout the history of medicine the intestinal tract has borne the lion's share of blame for the ills of mankind.

Study of human lore of all times and places reveals the importance attached by the human mind to this system of the body, an emphasis which partakes of the same vagueness as its pseudoscientific application in the autointoxication theory.

Knowledge therefore must become more definite. Have we in the alimentary tract an extensive menace to health? Is every other part of

the organism at the mercy of its powerful toxic influence, the central nervous system no less than any other, and befogged, benumbed, and seriously disturbed by it? Or is this a willing servant performing a definite service in the body economy and only disturbed when it must respond to a misdirection which the organism puts upon it? Its over-valuation and its undervaluation both lead to such disturbance.

They even prove that brain, the master servant in the household of the body, is more dominant over this inferior system than subject to its toxic influences. There did arise in the geologically remote past, as Gaskell has shown, a decisive moment in the process of evolution when Nature had to push her developing forms in one direction or the other. An antagonism had arisen as to the dominance between the nervous system and the alimentary system which, up to this point, that is, in the crustacean invertebrates, had been lying together. Brain triumphed, however, by the enclosure of the old alimentary tract in the central nervous system to form the neural cavity, and a new digestive apparatus had to be formed.

This started the vertebrate upward development, which could only come about through the evolution and progressive establishment of the complexity of the central nervous system. The establishment of the new digestive system showed, moreover, two things. It was vitally necessary to continue such a functioning system, but at the same time it was separate, pursuing its activity in its own direction, and therefore of far less potency of influence upon brain and other organs than has been supposed.

This distinctiveness is made manifest in some recent work on intestinal obstruction (Dragstedt, Moorhead, and Burcky: *Intestinal Obstruction*, *Journal of Experimental Medicine*, xxv, No. 3, March, 1917), in which the authors have made a careful experimental study of obstruction with a view to determining the actual toxic action exerted upon the organism by the obstructed portion of the intestine. They succeeded in confirming previous conclusions that the toxic substances produced in the intestines do not have access to the blood, since "it is the function of the cells [of the mucosa] to change the substances in the lumen of the intestine to substances which can enter the blood stream without harm to the organism."

Bacterial proliferation and necrosis of the obstructed loop produce a greatly exaggerated toxicity which proves fatal. The experiments, therefore, conclusively confirm something much more important than the overthrow of certain other unjustified theories, which the experimenters had in mind. They show that it is necessary to reach the extreme necrotic and gangrenous condition of the completely obstructed

loop, before a toxemia can be produced sufficient to overcome the neutralizing protective action which has been provided in the intestinal mucosa.

The clear cut conclusions of these direct experiments teach us to let the intestinal apparatus alone. Long ago its definite place was set and there it will perform its task under the control of the nervous system. There is no excuse for attributing to it the burden of all bodily and mental ills. It was developed through slow ages for its task, it built up its own slow defense against interference from without, or against meddling on its own behalf with the rest of the body.

Do not let us encourage our patients to feel that the sun will no longer rise and set if the bowels fail to move to-day or even the next day. Give the bowels more credit for an evolved ability to attend to their own affairs.

[*Journal American Medical Association*, May 19, 1917]

ISOLATED TOOTH SIGNS OF INHERITED SYPHILIS

Sabouraud for five years has been studying a certain anomaly in the first large molars in the upper jaw, which he has found only in children and other persons giving a positive response to the Wassermann test. He hence regards it as a sign of inherited syphilis, and it often is the only sign to call attention to it. Normally, each cusp of a tooth corresponds to a root, but in the molars in question there seems to be a supernumerary cusp on the inside of the tooth. It forms a protuberance more or less pronounced, and he has discovered it often when the teeth otherwise seemed free from syphilitic stigmata. He calls it the *cminence mamillaire de la face interne des premières grosses molaires supérieures*, and relates instances in which it gave the clue to specific and effectual treatment. His illustrations show teeth with this rudimentary cusp, with views of normal teeth and of the well known types of other syphilitic dental anomalies.

[*British Dental Journal*, April 16, 1917]

MOTOR DENTAL CAR FOR FRANCE

Last July the first of four dental motor ambulances for service with the French Army was sent out by the London Committee of the French Red Cross. An official inspection of the "Voiture de Stomatologie, No. 2," took place in the War Office quadrangle and was recorded in this *Journal*.

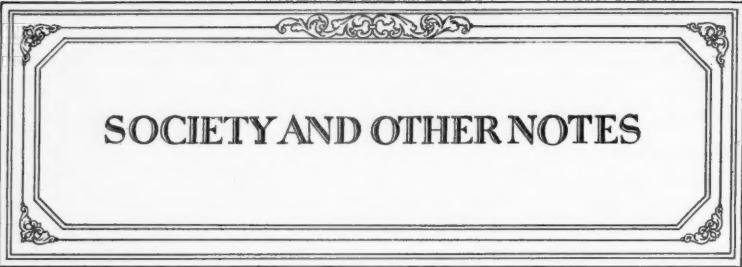
On April 4 there was on view, in the courtyard of Devonshire House, a fully-equipped motor dental car, bearing the inscription "Presented

by de Trey and Co., Ltd., for service with the British Army in France." The inspection attracted many interested spectators, who expressed much admiration for the skill and ingenuity evinced in both dental and mechanical equipment of the vehicle. It comprises a 32 h.p. Albion 4-cylinder engine and chassis, with a speed of twelve to fourteen miles per hour. The fittings are on much the same lines as in the French Red Cross car, but this, the latest car, embodies some valuable improvements in design and arrangement which are the result of the practical experience of our member, Lieutenant A. Parker Cater, G.B.C., 36 *Corps d'Armée Française*, whose article, describing "The First Dental Operating Vans for Army Service," appeared in our January 15th *Journal*. Notably, the new car has more room and more light. The interior is provided with the latest Columbia chair, which is movable on 4 ft. of rails, and also a portable, folding dental chair, which can be used in the open or in a tent; cabinet, foot engine, bracket table, spittoon, vulcanizer, Primus stoves, lathe and work bench, sterilizer, store lockers, &c.; also both electric and acetylene lighting. The rear portion of the car forms a platform extension of the surgery. All the fittings and equipment, except the lockers, are easily removable, so that on emergency the car could be practically cleared and used as a hospital ambulance for the wounded.

Lieutenant Parker Cater, who was requested by the War Office to design and organize this motor dental car, was present to explain the working details. The car has been presented by Messrs. de Trey to the Army Medical Service for use with the British troops in France.

WHY NOT NEW YORK AND OTHERS?

Indiana has proven to be a leader in sane dental legislation. Reciprocal relations have been established with Ohio, Michigan, Illinois, Minnesota, Iowa, Nebraska, Kansas, Kentucky, Missouri and Louisiana, upon the following terms: "Any applicant who has been in legal and ethical practice in any of the above states for not less than five years and who is a member of the State Dental Society, and who has the recommendation of the Board and Society of his state, may be admitted to our examinations at any regular meeting and excused from all theoretical examination, being required to pass the practical examination only."



SOCIETY AND OTHER NOTES

NATIONAL DENTAL ASSOCIATION ANNOUNCEMENTS

PARTIAL PROGRAM

Up to date the following reports have been received from the various Section Chairmen, Committeemen, etc.

Section I.—Chairman Dr. E. D. Coolidge, 59 East Madison Street, Chicago, Ill.

“Some Neglected Operative Pre-requisites.” By Dr. Fred E. Hart of San Francisco.

“Porcelain Inlays” (except title not yet chosen). By Dr. W. L. Fickes, Pittsburgh, Pa.

“Interpretation of Radiographs.” By Dr. Howard R. Raper of Indianapolis, Ind.

“Present Tendencies in Operative Dentistry.” By Dr. J. M. Walls of St. Paul, Minn.

Also an important paper dealing with the subject of dental education. Essayist not selected as yet.

Section II.—Chairman Dr. F. B. Moorehead, People’s Gas Building, Chicago, Ill.

Dr. Virgil Loeb of this Committee reports that he had thus far accepted two essayists. Dr. Elmer S. Best of Minneapolis, on some phase of root canal filling; and Dr. Howard R. Raper of Indianapolis, on “Misinterpretation of Radiographs.”

Section III.—Chairman Dr. L. E. Custer, 28 North Ludlow Street, Dayton, Ohio.

“Ionization, With Special Reference to Ionic Chemistry.” By Dr. Geo. T. Fette, Cincinnati, Ohio.

“The Chemical Action of Soil Bacteria on Calcium Phosphates, With the Chemical Analysis of the Human Teeth.” By Dr. J. E. Hinkins of Chicago, Ill.

“Why Measurements of the Mandible, Tracings of the Condyles, the Construction of Hypothetical Triangles, and the Use of the Face-Bow, are all Non-Essential in the Construction of Dentures Possessing

the Highest Degree of Efficiency." By Dr. D. D. Campbell of Kansas City, Mo.

"Paper, subject to be announced later." By Dr. Calvin S. Case of Chicago, Ill.

STATE SOCIETY OFFICER'S SECTION

Chairman Dr. John C. Forsyth, 430 East State Street, Trenton, N. J.
First Session. "Some Phases of Post-Graduate Work." By Dr. B. L. Shobe, Tulsa, Okla.

"Securing Some Satisfactory Legislation." By Dr. Alexander H. Reynolds, Philadelphia, Pa.

The Second Session will be devoted to six or seven short papers of five to ten minutes each by men of different State Societies, telling of some outstanding feature of their State Society's work that is thought to be of the greatest importance, or, if the essayist prefers, he may present the weak part of the work and ask for suggestions to help them out.

COMMITTEE ON ANESTHETICS

The Secretary of this Committee, Dr. Chalmers J. Lyons, of Ann Arbor, Mich., reports as follows:

"The Teaching of Conductive Anesthesia." By Dr. Theodore Blum of New York City.

"After-Pain in Local and General Anesthesia." By Dr. A. E. Hertzler of Kansas City, Mo.

"The Toxicity of Local Anesthetics." By Dr. Geo. B. Roth of Washington, D. C.

COMMITTEE ON ENTERTAINMENT

At a recent meeting of this Committee a Ladies' Auxiliary was organized, of which Mrs. Dr. M. L. Rhein was made the chief officer, and Mrs. Dr. Henry W. Gillett, 140 West 57th Street, New York City, Secretary. It would greatly facilitate the endeavors of the Ladies' Auxiliary to add as much as possible to the pleasures and comforts of the visiting ladies, if those who intend to come to New York would notify Mrs. Gillett, stating if possible, the hotel at which they will be registered.

R. OTTOLENGUI, Chairman Publicity Committee.

RAILROAD RATES

The Trunk Lines, New England and Central Passenger Associations have granted a rate of two cents per mile in each direction, going and returning via the same route only, limited to midnight of October 30th.

Going tickets in Trunk Line territory will be on sale October 19th, 20th, 21st, at the one way fares, on the certificate plan, these certificates to be endorsed by General Secretary Otto U. King and to be validated by the Special Agent of the railroads who will be in attendance on October 24th-25th-26th. Return tickets to be sold on presentation of validated certificates October 24th to 29th at the difference between the fares paid on the going trip and the fares for the round trip. Return limited to continuous passage to destination and not later than October 30th. This applies on tickets with a minimum of \$1.00 for round trip.

New England Passenger Association tickets to be sold or certificates issued and good going October 19th-20th and 21st and returning not later than October 30th, two cents per mile each direction, shore line mileage, going and returning via the same route only.

Central Passenger Association territory round trip tickets requiring validation at New York City, will be sold on October 19th-20th and 21st with a final return on October 30th, two cents per mile in each direction.

There will be no fee for validation.

COMMITTEE ON TRANSPORTATION,
D. C. BACON, Chairman.

FUTURE EVENTS

July 9, 1917.—So. Dakota State Board of Dental Examiners, Sioux Falls, So. Dak.—ROBERT JASMANN, Scotland, S. D., *Secretary*.

July 9-13.—Montana State Board of Dental Examiners, Helena, Mont.—G. A. CHEVIGNY, Butte, Mont., *Secretary*.

July 10-12, 1917.—Wisconsin State Dental Society, Janesville, Wis., DR. THEO. L. GILBERTSON, 128 Wisconsin St., Milwaukee, Wis., *Secretary*.

July 11-13, 1917.—The Forty-seventh annual convention of the New Jersey State Dental Society at Atlantic City. The entire convention will be held on Young's Million Dollar Pier.—JOHN C. FORSYTH, Trenton, N. J., *Secretary*.

September 5-8, 1917.—Annual Meeting American Society of Orthodontists, Excelsior Springs, Mo.—F. M. CASTO, Rose Bldg., Cleveland, O., *Secretary*.

October 19-20, 1917.—National Association of Dental Faculties, Hotel Astor, New York City.—CHARLES CHANNING ALLEN, Kansas City, Mo., *Secretary*.

October 22, 1917.—The Alumni of the Xi Psi Phi Fraternity dinner at Waldorf Astoria Hotel, Fifth Ave. and 35th St., New York.—J. Norbert Gelson, D.D.S., 282 Park Place, Brooklyn, N. Y., *Chairman Dinner Committee*.

October 22-23, 1917.—National Association of Dental Examiners, New York City.—J. A. WEST, Des Moines, Ia., *Secretary*.

October 22-26, 1917.—National Dental Association, New York City, Hotel Astor, Broadway and 44th St.—OTTO U. KING, Huntington, Ind., *Secretary*.

Dec. 4-6, 1917.—Ohio State Dental Society, Cleveland, Ohio.—F. R. CHAPMAN, 305 Shultz Bldg., Columbus, Ohio, *Secretary*.